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Extensive Compound Fracture of the Leg; Recovery by Conservative Treatment. By A. G WALTER, M. D., Pittsburg, Pa.

James Ward, aged 29 years, of Mifflin township, Allegheny Co., Pa., coal miner by trade; always healthy and temperate; of small wiry stature and good constitution, with nervo-sanguineous temperament, on March 26, 1864, entered my Institute, having fractured and lacerated his left leg by a piece of "horse-back" slate, of about three hundred pounds weight, falling upon it. An oblique fracture of the tibia and fibula, with a laceration of the skin and fascia, in the longitudinal axis of the limb, to the extent of four inches, was found, the wound being covered with coal dust. The great toe was torn, and nearly stripped of dermis and its nail. There was another cut above the first one, in front of the limb, and a third on the posterior face of the leg, each measuring about three inches. After the wounds had been cleaned of dirt, by ablution with tepid water, attempts were made to reduce the fracture and bring the broken fragments in situ; but the superior one, very oblique and denuded of periosteum, could not be kept down, and, therefore, was resected, along with the pointed extremity of the lower one, by the chain-saw, three-quarters of an inch being removed. The lips of the wound were next gently approximated by narrow strips of muslin encircling the limb, a ground

linseed poultice was applied, and the whole extremity secured upon my volar sheet-iron splint, with lateral splints embracing its sides. Notwithstanding the wound was kept open, allowing all secreta to be promptly discharged, phlegmon of the whole leg and outside of the femur, with profuse suppuration and irritative fever followed, requiring free incisions along the lateral faces of the limb, for the evacuation of the burrowing matter. Lint, soaked in tinct. opii, crocata cum tinct. myrrhæ, was daily applied to the wound made by resection of the fractured ends of the tibia, which induced granulations to grow out, yetnot as vigorously and healthily as is generally the case in resection. Suppuration, the effect of the phlegmonous inflammation, gradually subsiding, the wounds, which had been made, soon closed; yet at the end of two months, faithful dressing, assisted by a nutritious diet, with tonic and stimulating medication, union, at the seat of fracture, was still absent. The granulations, though filling up the bottom of the wound, continued flabby, not ready to be converted into bony material, while the pulse remained quick, yet the appetite was good, and general functions normal. Very small spiculæ of bone detached themselves, from time to time, from the resected extremities. A month later, though the general health appeared good, with absence of fever, all functions being duly and normally performed, consolidation had not progressed; the papillæ carneæ in the wound, still remained soft and unhealthy, and an angry, livid blush surrounded the seat of fracture, over which small ulcers, with sharp edges and scooped bottom, were scattered. Not being able to account for this want of reparation, under conditions of the system otherwise favoring repair, the liberal diet, with stimulant and tonic medicines, as quinine, iron, phosphoric acid, tinct. cinchonæ, and milk-punch, were unremittingly continued, and the resected extremities braced together and held in this position by plaster strips, laid along the side of the limb, and confined by the circular ones around the knee and above the ankle. By thus narrowing the space between the resected extremities, which were rounded off and bulbous, and forcing them together, it was hoped that consolidation still would follow. Remaining, however, in the same condition, though various stimulating dressings had been resorted to, fourteen weeks after the accident they were again resected, to the extent of an inch each, and found to consist of new, firm, bony material, depos-

ited over, and incorporated with, the old bone, without sequestrum. Great care had been taken, during their removal, to save the periosteum, which was carefully detached for the subsequent formation of new bony tissue. The fibula had firmly united. The wound was now loosely filled with lint, soaked in tinct. opii and myrrh, which was daily changed, while immovable rest to the whole limb, and the same tonic and stimulating treatment was persevered in. Granulations again began to grow out, filling the gap between the resected extremities slowly, yet steadily—the angry blush, surrounding the seat of fracture, having disappeared. On November the 9th, nearly six months after the accident, however, the tibia was found ununited, though the wound over it had been closed, leaving a depressed cicatrix, with fistulous openings. Opposite the seat of fracture, on the posterior surface of the leg, a fistulous opening was noticed, leading to the fracture. Small abscesses next formed around the wound, denoting an unhealthy condition of the limb, in consequence of which, consolidation of the granulations thrown out between the resected bone was prevented. The limb was now firmly bandaged and supported by splints, after which the patient was allowed exercise on crutches, hoping thus to excite more vigorous healthy action in the limb, with eventual bony reunion ensuing. Though firm compression of the limb was kept up for several weeks, yet ossification of the tibia had not yet taken place at the close of December. There was still a fistula left, with unhealthy, greenish edges, into which a probe entered some distance, in an outward direction, discharging thin offensive matter, which chafed the surrounding skin, already angry and deeply reddened. Various detergent applications were made use of, and cod-liver oil administered internally, along with the tonic remedies previously ordered. A month later the fistula had healed, yet ligamentous union only connected the broken resected fragments. Some superficial ulcerations having appeared on the inner face of the right thigh, with knotty lymphatic enlargements, seated under the skin, which extended towards the groin — simulating the expression of a scrofulous taint in the system, as a barrier to ossification of the tibia—the use of cod-liver oil was continued. He left my Institute, for the country, some weeks later, with his limb embraced in leather splints, and was directed to walk, but lightly supporting himself on crutches. Some months later, he returned, able to

walk upon his limb; but union, at the seat of fracture, though firmer, had not become osseous. A year after, I saw him again; union then appeared to be bony, no motion, at the seat of fracture, being perceptible. He still wore the leather casing, determined not to leave it off, for fear of injuring the tissues which were so tardy in consolidating. He has perfect use of the limb, and feels greatly gratified at his own patience for having nursed his limb so long, (which his friends, during those trying months, had frequently urged him to have removed,) and at our perseverance and exertions, which wrought its eventual recovery.

The crushing force, which the limb of this man had received, producing extensive laceration of the soft tissues, and fracture of the bones, was severe enough to demand, according to the rules of surgery, primary amputation; and fully justified were the two medical men who saw the case first, in urging it upon the patient. Yet, reluctant to part with his limb, I too, failed in convincing him of the risk to life by attempts at saving. Conservative surgery was therefore embraced, and succeeded, after the lapse of many months, in restoring the limb to its former usefulness, which, but for the perseverance and patience of both patient and surgeon, would, undoubtedly, have been sacrificed.

The tardiness, however, with which granulations appeared at the seat of resection, and their flabby, unhealthy condition, in a constitution, otherwise apparently promising vigor of repair, was a source of anxiety for many months, greatly increasing the burden of the conservative surgeon. The cause of the slowness of repair, notwithstanding vigorous local and general means had been called into requisition, could not well be defined. Was it due to destruction of periosteum, by force of injury and subsequent sloughing and suppuration, or to a taint of the system, syphilitic or otherwise?

Proof of the former, though probable, failed to be adduced, while syphilitic poisoning, at any time previous to the injury, was decidedly denied by the patient. To attribute it to a scrofulous cachexia lingering in the system, in the absence of exterior indications, can not be sustained by experience, as scrofula seldom shows its ravages at this time of life, without previous manifestations; and, moreover, as in the resection of bones of confirmed scrofulous children, exuberant granulations, and their

rapid formation into bony material, is generally noticed. Yet cod-liver oil, with tonics was freely used, but no claim is attached to the former for having expedited the ossification, which had been so long delayed. In the absence of any palpable cause, this anomalous condition of the system in not responding to the action of the local and general remedies which are known to promote healthy and vigorous bony repair, may be assigned to want of fresh air, to which the patient had been habituated before in the country, and to confinement in a hospital, though otherwise conducted with strictest regard to hygienic rules.

If eventual success, though delayed longer than reasonably could have been expected, has been the result in this case, what greater stimulus for exertion, in the conservative field, is needed by the surgeon? How inviting its cultivation, promising such rich and beneficent fruits. Sad as is the reflection of the portentous number of mutilations, *unjustly*, thus far, entailed on the afflicted, it is consoling to hope that under conservative rule, certain to reign, the number of amputations *absolutely* required in injuries, even of the gravest character, ought and will *then* be but very limited.

Admitting that a certain amount of experience in conservatism is of great value, in successfully treating cases of this nature, yet, even without it, every surgeon can be conservative and successful likewise, if but rashness in judgment and action, love of mechanical display, and that reprehensible craving for renown by amputation, is discarded, and in their place, mercy to the afflicted, and devotion for his restoration, even at the expense and sacrifice of much labor and toil, is anxiously and ardently cultivated, while the management of the case is mainly intrusted to the hands of Nature. As determined and persevering action is the great lever of success in every worldly calling, in conservative surgery it will not be less so, if but the erroneously existing pressing necessity of immediate mutilation by amputation, in severe injuries—so generally and tenaciously upheld—be discarded; and with it hesitancy in action, and doubt about the issue, by conservative treatment, be removed. The fallacy of human judgment being proverbial, and many cases of severe injuries having been known to recover under the patient's resistance to amputation, in the face of the surgeon's most strenuous and unequivocal assertions to the contrary—of

which the late national war has offered many examples,—mercy to the afflicted, by conservative treatment, should not be denied; which has proved more potent than was ever expected by its most ardent cultivators. Yet, so long as the love of renown and reward for the number of amputations performed, remains the ruling passion of the surgeon,—forgetting that one limb saved, when apparently hopelessly injured, or almost irrecoverably diseased, reflects greater and brighter credit than an hundred successful amputations,—conservative surgery will be cultivated but by a few, to the evident injury of the science of surgery, alike as to that of the afflicted. This love and spirit of false professional pride, seeking social and pecuniary advancement by mutilating operations, too common in general, and in the locality of the writer, not the less prominent amongst professed surgeons, must first cease before the yet hidden blessings of conservatism can be fully unfolded for the benefit of the afflicted. That these happy days, however, inaugurating a reform in the treatment of surgical injuries and ailments, by conservative means, are seen looming up in the distance, and steadily approaching, the daily records of surgical progress are plainly and happily attesting.

On Paraphymosis. By N. B. Wells, M. D., LaGrange, Ky.

In a practice of some twelve years extent, I have been called to treat some half a dozen cases of paraphymosis. In the first case, which occurred in a boy of about eight years of age, I tried the usual method of reduction, viz: by seizing the body of the penis between the index and middle-fingers of either hand, and endeavoring to draw the prepuce forwards, at the same time compressing the glands between the two thumbs, and pushing it back. In this attempt I failed, and then resorted to the knife, dividing the constricting preputial orifice, which enabled me to bring the prepuce forward, after the application of some evaporating lotion.

The subsequent cases were reduced without the use of the knife, after the manner above indicated, excepting the last one, which occurred to me this day. It was the case of a little boy of some six years of age. Last night, by some means, he retracted the prepuce, and was unable to return it to its proper place. Great constriction about the sulcus was the result. The little fellow

fretted and chafed all night under the pain attending his condition, and would not tell his parents what was the trouble, only answering that his bowels pained him, on being questioned by them. This morning, early, he, however, let them into the secret of his true condition, whereupon they immediately summoned me to his assistance. On arriving, I endeavored to reduce the deformity by the method above indicated. After several determined efforts, which caused him great suffering, I was compelled to give it up, with the idea that I should have to resort to the bistoury. I examined Druit, Erichsen, etc., on the subject, and both these good authorities gave me no other comfort, after the failure of the *manual* method, save the knife. But feeling loth to resort to this method; in this case, I resolved to try an evaporating and astringent application for a few hours, with the view of reducing the serous effusion under the integument, and the general swelling and inflammation as well, and thus, possibly, be enabled to bring the prepuce forward to its wonted position, without cutting.

Accordingly, I made a strong solution of acetate of lead in pure water, and with this I kept the whole organ well enveloped for eight hours, by means of soft old cotton, and at the end of this time (this evening) I was able to reduce the paraphymosis with but little trouble or pain to the patient. Very soon after this he evacuated the bladder, and is doing well.

I do not report this case because I consider the treatment of it very instructive, or unique. Possibly, hundreds of cases of this class have been treated by my professional brethren in the same manner, or perhaps more skillfully. But the important point with me, in saying aught upon this subject is, that I may suggest the possibility, in many of these cases, of reducing them back to their natural state by means similar to that resorted to by me, in the above case, after failing with the *manual* method, and thus avoid the use of the knife, which is always fraught with much dread to parents, in the case of small children, to say nothing of the actual pain of the operation. And if the application of cold and astringents serve a good purpose with juveniles, why not be of equal benefit in cases of adults? While I would not presume to say that the above case should establish its treatment as a rule, yet it certainly affords a slight hint of the propriety of its trial, instead of invariably and abruptly resorting to the knife, in all cases, where the manual or digital plan fails.

Obstetrical Cases.—Cephalic Version. By Wm. Carson, M. D., Cincinnati.

On May 2d, 1866, I was called to see Mrs. N., in labor with her third child. I found her in charge of a German midwife, who officiates frequently in such cases, in the eastern part of the city. She had been in labor four or five hours. The waters had escaped, and with them the midwife had observed that the arm came down. A vaginal examination showed the hand and arm in the vagina, and the os uteri well dilated, with rather feeble pains. The woman's general condition was good. Preparatory to manual interference, I ascertained that it was the left arm and shoulder that was engaged, and that the head and face, in the right iliac fossa, were easily felt externally. My first impulse was to turn by the feet, but finally concluded to try cephalic version, for the reasons following.

The waters were evacuated, which would render podalic version more difficult than with undischarged liquor amnii. The uterine pains were feeble, and I found that the child could be moved, by an upward effort with my fingers in the vagina, with little resistance from uterine contraction, and the head of the child seemed to be easily manipulated externally. I accordingly returned the arm and hand within the os uteri; made upward pressure upon the shoulder, carrying it towards the opposite side from the head, and at the same time pressure upon the head by external manipulation; and had the unexpected satisfaction of finding that the presentation of the child was being changed to that of the vertex, in the second position. I continued the external pressure, and maintained the vertex in position until I felt it was secure by uterine pains. I left her, with the direction that, if her unassisted efforts were not sufficient to accomplish her delivery within two or three hours, I should be sent for. I was called within that time, and concluded to deliver with the forceps, which was done immediately, the child being dead.

It would seem that this was a case unusually favorable for the performance of cephalic version, from the relaxed condition of the abdominal walls and the uterus. An unfavorable circumstance was the fact that the liquor amnii had been discharged and the shoulder well engaged. The particular manipulation which Prof. M. B. Wright, who has written on this subject, uses (and describes in his prize essay), is as follows, "we apply our fingers upon the top

of a shoulder, and our thumb in the opposite axilla, or on such part as will give us command of the chest, and enable us to apply a degree of lateral force. Our left hand is also applied to the abdomen of the patient, over the breech of the fœtus. Lateral pressure is made upon the shoulders in such a way as to give the body of the fœtus a curvilinear movement. At the same time, the left hand, applied as above, makes pressure, so as to dislodge the breech, as it were, and move it toward the center of the uterine cavity. The body is thus made to assume its original bent fœtus, the points of contact with the uterus are loosened, and perhaps diminished, and the force of adhesion is in a good degree overcome. Without any direct action upon the head, it gradually approaches the superior strait, falls into the opening, and will in all probability, adjust itself as a favorable vertex presentation. If not, the head may be acted upon as in deviated positions of the vertex, or it may be grasped, brought into the strait, and placed in correspondence with one of the oblique diameters. The mode we adopted was the one commonly in use, and different from that recorded above. The result was easily accomplished in our case, and with less effort and difficulty than is usual in podalic version.

Rupture of the Uterus.—On Sunday, February 10, seven o'clock, A. M., I received a message to call on Mrs. F., East Front street, who had been in charge of a midwife, during the evening and night previous. She had had four living children, without any difficulty and with very short labors. I found a vertex presentation, and the head within easy reach, in the superior strait. The woman was restless, with a feeble pulse, and anxious for relief. I learned at that time from her attendant, of nothing unusual in the course of her labor. The indications were to relieve her quickly, and for that purpose I went for the forceps. Upon my return, in half an hour, I found such a change, and so much prostration, that I concluded there was some unusual reason for it, and that she would probably die in the act of artificial delivery. I ascertained, that up to eleven o'clock of the night before, she had had regular and active pains—that about that time she had exclaimed, "Oh I'm burst"—that her pains then ceased; she had had chills and had perspired freely at times since that. The failure of vital power was very rapid after we saw her.

We concluded from this history, that the uterus had been

ruptured at the time of her exclamation—eleven o'clock, the night before—and eight and a half hours before we saw her. External examination showed a large distended, but yielding abdomen. The limbs of the child could not be felt; nor did the uterus seem to be contracted, as it would naturally be with the fœtus in the abdominal cavity. The head of the child had not receded in the pelvis. After consulting with Dr. Littel, whom I met in the neighborhood, we concluded no interference was advisable, as the woman would evidently die very soon. There was no evidence of the child being alive. She died within an hour. Upon opening the abdominal cavity, soon after death, in presence of Drs. Dawson, Littel and Minor, we found considerable effusion of blood in it, and a transverse rent in the anterior and inferior portion of the uterus, involving the cervix. The child had only partially protruded from the rent, and it required some effort to withdraw it from its position. The head was hydrocephaloid, which was a sufficient explanation of the accident. There thus was produced a relative deficiency of the pelvic diameters. There was no actual deficiency, as examination and the history of her preceding labors had shown. The pressure upon the uterine walls between the enlarged head and the anterior portion of the pelvis, might account for the transverse rupture at that point. The diameters of the head measured as follows: Bi-parietal, five and three-quarter inches; antero-posterior, seven and one-half inches; circumference, eighteen and three-quarter inches.

Many of the predisposing causes of rupture do not seem to have existed in her case. The uterus did not appear thinned or softened, so far as our examination went. The uterine contractions had been vigorous up to the moment of rupture. There was no history of any predisposing cause from her former labors. She had recovered rapidly from them without any metritis or puerperal accidents. Frask, in his monograph on rupture of the uterus, published in *American Journal Medical Sciences*, of 1848, mentions a case where chronic inflammation had supervened previously to her last labor, "which resulted in softening of the uterus, the resistance of a dropsical head causing laceration of the organ after a very few pains." The dropsical head was the chief predisposing, and the active uterine pains the immediate, cause of the rupture. She had not taken ergot.

Among nearly three hundred cases of rupture in Frask's mono-

graph, in eight there were dropsical heads. No measurements are given.

At the time we were called to this case, the woman, from the accounts of her attendants, had been in labor at least twelve hours. The rupture had occurred eight and a half hours before, and the woman was too feeble to justify interference. Besides, the child was dead. If we had been called at the time of the accident, or soon after, the mode of relief would have required consideration. Gastrotomy would have been the most feasible operation.

Croup. Translated from Niemeyer's Lehrbuch der Speciellen Pathologie und Therapie. By SAMUEL NICKELS, M. D.

Pathology and Etiology. Croupous inflammation presents that form of inflammatory structural disorder in which a fibrinous exudation, which coagulates rapidly, takes place upon the free surface of mucous membranes, involving only the epithelium. If the resulting croup membrane is thrown off, the epithelium is rapidly regenerated; no loss of substance occurs; no cicatrix is left. Diphtheritic inflammation, which is rarely observed on the respiratory mucous membrane, is also attended by a rapidly coagulating exudation, rich in fibrine, differing however from that of croup, by being exuded, not *upon*, but *in* the mucous membrane, infiltrating its tissue, and compressing its vessels, so that the mucous membrane loses its vitality, and is changed into a slough. This is cast off; there is loss of substance, and later, a cicatrix. Only secondary croup, *i. e.*, croupous laryngitis, which must be regarded as a symptom of general constitutional disorder, and which is occasionally associated with measles, small-pox, typhus, but particularly scarlatina, presents a transition from the croupous to the diphtheritic form of inflammation of mucous membranes, and is frequently observed affecting the pharynx in bad cases of scarlet fever.

Croup, which is not often observed on other mucous membranes than the respiratory, presents the peculiarity that it is almost wholly confined to the larynx and trachea, during childhood, and rarely attacks the air-cells; that, on the contrary, croupous pneumonia—a true croup of the air-cells—is a frequent disease in adult life, when the larynx and trachea are almost exempt.

Though croupous laryngitis is, accordingly, almost confined to childhood, yet the predisposition is not marked in infancy; the disease, likewise, becomes rare, after the second dentition; the greatest liability to croup, therefore, is found between the second and seventh years. Boys are attacked more frequently than girls; but it is an error to suppose strong, blooming, well-nourished children pre-eminently predisposed; on the contrary, delicate, weakly children, who are the progeny of tuberculous parents, and who present evidences of defective nutrition, pale skins, intensely blue veins; who are liable to serous skin diseases, to enlargements of the lymphatic glands, to acute hydrocephalus, are also more prone to croup. It is a matter of daily experience that, in certain families which present a great mortality, a part of the children die of hydrocephalus, another part of croup, while the surviving ones become tuberculous at a later period in life. Not unfrequently, croup becomes developed soon after the disappearance of a moist eruption from the head and face.

Croup is more frequent in northern regions, which are much exposed to wind and moisture, than in southern, better protected places. Sometimes croup becomes epidemic; many children are attacked, even in small places; not seldom several children of the same family, in a short time, suffer from the most intense and pernicious forms. It is this epidemic variety which seems most frequently to be associated with croup of the pharynx.

The exciting causes of croup are, in most cases, unknown; in some cases the disease appears to be induced by direct irritation of the laryngeal mucous membrane, or by cold. Sharp north or north-east winds are in bad repute.

Morbid Anatomy.—The diseased mucous membrane presents different degrees of redness, from slight vascular injection to ecchymosis. It has been asserted that the redness is less, as the exudation is more abundant; and from the occasional absence of the redness it has been concluded that croup presents a particular form of inflammation, running its course without hyperæmia. We have already shown that the paleness, after death, of mucous membranes, which were hyperæmic during life, is owing to the abundance of elastic tissue they contain.

The mucous membrane is denuded of its epithelium, and, like the sub-mucous tissue, swollen and spongy; even the muscles of the larynx appear *moist*, *pale* and *soft*. Very frequently, but not

always, the free surface of the mucous membrane is found covered with the croupous exudation. The absence of the croup membrane in the cadavers of patients who had died with the phenomena of croup, has been the occasion of the artificial division into *true* and *false* croup, and many physicians still affirm that, in the numerous cases in which no membrane is found in the larynx, on post-mortem examination, the patient did not die of "genuine" croup. In croup, of course, as in other diseases, there exudes a fluid plasma, which coagulates after exudation. Should it be thrown off before death, either in the fluid or coagulated form, the larynx would be found free; but the disease would nevertheless be the same as in those cases in which a coagulated exudation lines the mucous membrane. The croupous exudation sometimes possesses the consistence of glutinous cream; sometimes forms compact, tough membrane; sometimes it lines, as a continuous membrane, the internal surface of the larynx; occasionally being continued down into the trachea and bronchi, in the form of branching tubes; sometimes only few flakes and patches are found adhering to the mucous membrane. The soft and thin pseudo-membranes are easily separated from the mucous membrane; the tough and compact are more adherent. The external surface of the firm, dense, pseudo-membranes, which are often more than a line in thickness, presents frequently numerous red streaks and spots of adhering blood, which correspond to small bleeding points of the mucous membrane. After adhering for some time, the pseudo-membranes are loosened by a serous exudation coming from the surface of the mucous membrane, and are then expelled, either in the form of complete tubes, or flakes and patches. If the course of the disease be favorable, the epithelium is soon restored, and the laryngeal mucous membrane returns to its normal condition. In other cases the expulsion of the first pseudo-membrane is followed by further exudation; and thus the process may be repeated until finally exhausted, or until the patient succumbs.

The croup membrane is seen, under the microscope, to consist of amorphous or finely fibrillated fibrine, containing in its meshes numerous young cells, entangled during its exudation.

The frequent complication with croupous inflammation of the pharynx is of great importance in the diagnosis of croup, as well as in the physiological explanation of its symptoms. The

French consider only those cases true croup, in which this complication is present; all others, false croup. In Germany, also, the frequency of the simultaneous existence of both forms of disease has been confirmed, since attention was directed to this point.

A high degree of hyperæmia of the bronchial mucous membrane, and of the lungs, is almost always present; frequently, croup of the bronchi and pneumonia. We will explain these conditions as the necessary results of laryngeal croup.

Symptoms and Course.—In many cases the attack is preceded by precursory symptoms; the patient is capricious; presents slight febrile phenomena; is hoarse and has a suspicious cough. These may be the unimportant symptoms of a mild laryngeal catarrh, or the prognostics of one of the most destructive diseases of children. The observing physician will generally be able to distinguish, even at this time, the one from the other. *In all cases the fauces should be examined*, although no complaint of uneasiness in swallowing be made. If they are reddened, and the tonsils swollen; if they present, here and there, small, firm, whitish patches, we may consider this as pathognomonic of commencing croup. Just as we found frequent sneezing, copious discharge from the nose, with the same group of symptoms, characteristic of catarrh of the larynx. The individual predisposition should be considered, in making the diagnosis between croup and laryngeal catarrh. We need not feel so much alarmed about children who have become hoarse and had a barking cough after every slight cold, and whose brothers and sisters have not shown a predisposition to croup, as in those cases where the children have already survived attacks, or where brothers and sisters have died of this disease.

These symptoms may precede, for several days, the actual attack; but in many cases they are entirely absent, and the disease begins suddenly, and unexpectedly, with all its terrors. Late in the evening, or at midnight, the child awakes with a rough hoarse voice, or the voice is almost inaudible, and makes sudden transitions, from the ordinary soft low key to a very high shrill pitch, owing to the momentary contact of the vocal cords, which are swollen and often covered by exudation. The short sharp cough soon becomes rough and hoarse; and, if the effort be sufficiently strong to stretch and arch the vocal cords, barking,

but after a while, loses all sound. We *see* the child speak and cough, but do not *hear* it.

In addition to these symptoms, which depend solely on the softening and thickening of the vocal cords, and the exudation upon them, and which exactly resemble those of catarrh of the larynx, we find a continuous, perilous dyspnœa, pathognomonic of croup, but rarely, and then only transiently, associated with laryngeal catarrh. This dyspnœa, the result of narrowing of the glottis, and whose cause, in the absence of the croup membrane, we will endeavor to explain, is very peculiar, and not easily confounded with other forms of difficult breathing. The respiration is extremely *laborious;* one can see the great efforts the child makes to inspire. All the muscles aiding in the expansion of the thorax are in full activity; the child raises itself up and extends the vertebral column, in order to increase the expansion of the thorax, by elevating the ribs. Notwithstanding these forcible efforts, the air passes but slowly through the contracted glottis; the respiration is remarkably *protracted;* the forcible passage of air through the narrow glottis, produces a *highly characteristic whistling sound*, which once heard is readily recognized. During these laborious respiratory efforts, the dilator muscles of the alæ nasi contract, and thus expand the nostrils (an instinctive action of these muscles, without which the nostrils would be closed by the rapid rarefaction of the air in the nose), and though this rapid action of the wings of the nose is not pathognomonic of croup, yet there is another highly characteristic sign in cases of this disease, which depends on the rarefaction of the air in the thorax, necessarily resulting from its expansion while the glottis is contracted. We observe that the epigastrium, and even the lower part of the sternum, is forced deeply inward during each inspiratory effort. The diaphragm, overcome by the rarefaction of the air in the thorax, is forcibly drawn upward, as its thoracic surface is subjected to much less pressure than its abdominal surface. At the same time, the lower ribs are drawn inward, during inspiration, by the contraction of the diaphragm which is unable to approach the level position, and thus the lower thoracic aperture becomes narrowed.

The whole expression of the child indicates want of air, great exertions to obtain it, and despair, produced by the ineffectual efforts. The child desires to leave its bed for the arms of the

nurse, and then wants to return to bed; agony is apparent in its features; it strikes about itself; changes its position; takes hold of its throat and pulls its tongue to remove the obstruction; the face is disfigured and covered with perspiration. A child suffering from croup, is one of the saddest and most pitiable of sights.—[*Continued in next number.*

Uterine Exomphalos. Proceedings of the Academy of Medicine, Indianapolis, Ind., February 5, 1867.

Dr. D. H. Oliver read the history of an unusual obstetrical case, in which the child was born alive, after six hours of natural labor. The mother's abdomen presented a cone-like appearance at the time of confinement, the apex of the cone being about the umbilicus. Finding the presentation natural, he gave it no special attention until after the child was born. After the delivery of the child, the placenta not coming away, and the cord being very weak and slender, so as not to bear even slight traction, he examined the abdominal tumor more carefully, and found a dilated umbilical opening, through which the fundus of the uterus, containing a large substance of some kind, was projecting. This tumor-like projection was the fundus of the uterus, with its contents (subsequently determined to be the placenta very much larger than usual), projecting through the dilated umbilical opening of the mother, and slightly constricted by the recti muscles at the base. He elevated slightly the tumor, turned it edge-downward, and it passed with some noise into the abdominal cavity; after which the after-birth, weighing nearly eight pounds, was easily delivered. The child was healthy, but weighed only five pounds. He thought that the stricturing of a portion of the womb containing the placenta accounted for the disproportion between the placenta and child. He had never seen the mother until called to her during the labor, but learned that she had umbilical hernia when a child. She had had one child previously, without trouble, and made a good recovery. Nothing abnormal, except size, was observed in the placenta; no microscopic examination was made.

Dr. T. B. Harvey thought the labor was prolonged because the abdominal muscles could not act effectually. The size of the child would indicate that it was deprived of a part of the placental

supply of blood, by the constriction of the fundus of the suture by the recti muscles.

Dr. W. J. Elstun could not understand how hernia of the impregnated uterus could occur.

Dr. J. K. Bigler thought anteversion would favor it.

Dr. L. D. Waterman regretted that all the facts as to the condition of the abdomen before delivery, and the structure of the cord and placenta, were not obtained. There was early umbilical hernia and weakness of abdominal walls, and as the uterus enlarged, it passed in this direction naturally, giving the cone shape. There was disease of the placenta, probably, furnishing a meager supply of blood to the child, accounting for its proportionately small size; and the placenta was over-developed by nature's efforts to make amends for quality by quantity.

Dr. James H. Woodward believed that the placenta was imprisoned ; thus cutting off the circulation from the fœtus.

Dr. John A. Comingor thought the difference between the size of the child, cord and placenta, of interest, and that there was a hernia, somewhat constricted, by reason of its size, of the fundus uteri with the placenta enclosed.

Dr. T. M. Stevens thought the placenta increased in size, in obedience to the law that "diminished pressure admits greater growth." Could not believe there was stricture of any portion of the uterus during pregnancy.

Dr. J. M. Gaston could not see how pressure could have been exerted on the cord if there was no hernia. Thought the size of the placenta arose from some vice in the mother.

Dr. T. B. Harvey disagreed with Dr. Stevens, according to whose theory the placenta might fill the uterus if pressure did not prevent.

Dr. L. D. Waterman thought a stricture which would not interfere with the circulation between the placenta and the child would destroy a portion of the uterus. The uterus in developing with the fœtus would push out the walls, but not become strictured.

Dr. F. B. Nofsinger differed from those who thought the uterus was strictured by the muscles before labor, because the uterine vessels came from below the strictured part, and this would cause a diminished size of the placenta.

J. H. Woodburn, M. D., President.

F. B. Nofsinger, M. D., Secretary.

Reports of cases of *Uterine Exomphalos* are rare in the literature of the profession; and it is with great pleasure we publish Dr. Oliver's case, with the discussion that ensued in the Indianapolis Academy of Medicine upon its being reported.

In the Transactions of the London Obstetrical Society, vol. I, p. 77, Mr. Murray reports a case in which the hernial protrusion took place at the eighth month of pregnancy; the subject, thirty years of age, already the mother of three children, had always suffered from a slight and easily reduced umbilical hernia. The hernial tumor consisted of two-thirds of the uterus, the lower part toward the os lying in the grasp of the umbilical ring. The hernia measured seven or eight inches by five. An examination per vaginam proved that no os uteri could be felt with the finger, and the vagina greatly elongated, and narrowed, particularly the upper or uterine extremity of this canal. The umbilical ring measured from three to three and a half inches in diameter; and was capable of great distension. The hernia was easily reduced; the ring yielding readily, and equally all around. The patient accomplished her full term, and was delivered of a healthy child.

So, too, there are instances on record of separation of the fibres of the *linea alba*, allowing the protrusion of the gravid uterus; so too, of inguinal or femoral hernia of the uterus in like condition.

The weight of the placenta which Dr. Oliver gives in his case, is simply *enormous*, or, as Dominie Sampson would have said, *pro-dig-i-ous*.

Dr. Priestly, *On the Gravid Uterus*, London, 1860, says: "Taking the mature organ as our type, its diameter averages from seven to eight inches, and its weight from eighteen to twenty-four ounces. It is liable, however, to considerable variation, both in size and weight, being generally largest with the heaviest children; but instances are recorded by Wrisberg and Stein, in which the placenta had undergone such an amount of hypertrophy, as to weigh in one case three pounds, and in another six pounds." But here we have a placenta weighing nearly eight pounds—almost two pounds "better" than any previously recorded hypertrophied placenta! T. P.

Description of a Modification of the Operation for Strabismus. By RICHARD LIEBRIECH, M.D., Professor of Ophthalmology, Paris.

It is well known that, if the internal rectus muscle be divided in the manner now generally practiced, it is possible to correct a squint of from two to two and a half lines in adults, and from two and a half to three lines in children. But, if the deviation exceed this extent, it will be necessary to perform two, three, or even more, successive operations.

Whilst the division of the effect between the two operations, one on each eye, offers certain advantages with regard to the symmetry and uniformity of the movements of the eyes, the performance of a third or fourth operation—i. e., its repetition upon a muscle which already has been divided—is attended by great disadvantages. In fact, by such a repetition of the tenotomy, anything like an approximative calculation of the result is rendered impossible. In some cases the effect will be *nil*, in others excessive; so that, as was once said by a well known ophthalmic surgeon, when a third tenotomy has once been made, it is impossible to predict how many more it may be necessary to perform upon the same individual.

This is probably owing to the cicatricial adhesions which are formed after the first operation, as they prevent the performance of the usual simple tenotomy. For, if we be not careful to divide these adhesions completely, it may easily occur that a small band, which has escaped our notice, will mar the effect; or if, in order to secure their complete division, we have been obliged to incise the parts freely, a divergent squint (in division of the internal rectus) not unfrequently results, with considerable loss of mobility inwards, sinking of the caruncle, etc.; in short, all the disadvantages of the old and now abandoned operation.

About a year and a half ago, I felt anxious to remedy, if possible, these defects, by an alteration in the mode of operating; and I then determined to investigate, with greater accuracy: (1) the anatomical relations of the muscles, with regard to the capsule of Tenon, the sclerotic, conjunctiva, caruncle, etc.; and (2) the mechanical effect of the operation for strabismus.

The capsule of Tenon, which encloses the whole eyeball, with the exception of the cornea, consists of two very different portions. The posterior half, with its smooth, firm, inner surface, forms a cup in which the eyeball moves freely, as the head of a

joint in the socket. This cup is pierced by the four recti muscles, and forms, at the point of perforation, a sharply defined ring, which enters into so close a connection with the muscles, as to render any displacement between the two impossible. This close adhesion between the muscles and the posterior half of the capsule is, moreover, increased by sheath-like processes, which run backward from the outer surface of the capsule towards the orbit, and which are, for a certain distance, firmly connected with the muscles. But, toward the eyeball, no sheath-like processes extend from the posterior capsule; the latter terminates abruptly in the form of a ring, which encloses the spot where the muscles penetrate, and whence, for a very short distance, the muscles are quite free from any adhesion. But before the tendon is inserted into the sclerotic, it penetrates between the sclerotic and the anterior half of the capsule, and becomes united with the latter.

This anterior half of the capsule, which may be considered as standing towards the posterior portion in the relation of a semi-circular lid to a semi-circular cup, is much thinner than it, and is difficult to dissect, more especially on the dead body; for, like the conjunctiva, it rapidly diminishes in thickness and firmness after death.

If we trace the anterior half of the capsule from the anterior pole of the eye towards the periphery, we commence with a circular opening, which corresponds to the size of the cornea, and through which the latter projects. The margin of this opening is in close apposition to the sclerotic. Within a zone, which is bounded on one side by the opening on the margin of the cornea, and on the other by the line uniting the insertion of the four recti muscles, the conjunctiva, the capsule of Tenon, and the sclerotic are firmly and immoveably connected together. At the periphery of the zone, this condition becomes, however, changed. The connection between the capsule and the sclerotic is interrupted by the passage of the muscles. The lax cellular tissue, which here connects the sclerotic with the capsule and the inner surface of the muscle, may perhaps have given rise to such complex and fanciful descriptions as those of Guerin. (*Gazette Medicale*, 1842, No. 6.) The idea that the muscles, after they have pierced the capsule, are accompanied as far as their insertion by sheath-like processes derived from it, has, owing to these descriptions, maintained itself in ophthalmology even up to this time, and has served

as a basis for explanations of the effect of the tenotomy, the difference between the old and modern mode of operating, etc. This idea is, however, erroneous; for these sheath-like processes do not exist at all. But, as has been already mentioned, the anterior half of the capsule of Tenon certainly adheres to the upper surface of the muscle, and is intimately connected with it. On the other hand, the conjunctiva is here also tolerably firmly connected with the capsule, as far as a somewhat irregularly circular line, which may be recognized by the fact that it lies at the bottom of a furrow, when the eye is moved in an excentric direction. The formation of this furrow prevents the sinking and tilting forwards of the conjunctiva, which would otherwise occur near the caruncle, as, for instance, when the eye looks far inwards. From this marginal line, the connection between the capsule of Tenon and the conjunctiva becomes quite lax. One portion of the connective tissue, which composes the anterior half of the capsule, is reflected, and passes over into the submucus tissue of the eyelids; another portion attaches itself to the edge of the posterior half of the capsule, in order thus to close the latter. These two halves do not really pass perfectly over into one another, inasmuch as the edge of the posterior half of the capsule is partly continued into the band-like adhesions between it and the edge of the orbit.—From this description, we must call special attention to three points, as being particularly important with regard to the performance of the operation for strabismus.

1. The connection of the muscle with the capsule of Tenon is two-fold. On the one hand there is the annular connection of the posterior capsule, and its sheath-like processes (which are reflected towards the orbit) with the belly of the muscle; on the other, the firm adhesions of the anterior half of the capsule to the surface of the end of the muscle, which penetrates into the capsule.

2. The conjunctiva is firmly connected with the outer surface of the capsule of Tenon, from the edge of the cornea to an irregularly circular, sharply defined marginal line; and, consequently, it stands in a very important relation to the muscles of the eye.

3. The caruncle, together with the semilunar flap, rest upon a band-like ligament, which passes from the capsule of Tenon towards the edge of the orbit. Now, when the internal rectus is contracted, and the eye rolled inwards, this band is rendered tense; and the caruncle, which is fixed to it, is consequently

drawn in towards the inner edge of the orbit. But the outer edge of the caruncle, together with the semilunar fold and an adjoining portion of conjunctiva, are drawn backwards into a furrow. This is partly due to the fact that, during the movements of the eye, the conjunctiva lies, up to a certain point, in close apposition to the eyeball; and partly also to the fact that, on contraction, when the muscle, on account of its connection with the anterior half of the capsule, must draw the latter backwards, where it will be followed by the conjunctiva (which is likewise connected with the capsule), the semilunar fold, and the caruncle.

From a consideration of the first of these three points, we learn with regard to the mechanical effect of the operation for strabismus, that a division of the insertion of a muscle can only be brought about by a division of the portion of anterior capsule which covers the muscle. For this portion, which passes over the muscle to become attached to the sclerotic just before the insertion of the tendon, keeps the muscle in a fixed position with regard to the sclerotic; so that, if we attempt to sever the tendon from the sclerotic without dividing this portion of the capsule, the tendon would become reunited exactly at its original point of insertion; so that, in fact, it would not have receded at all. It would, however, be not only very difficult, but almost impossible, to avoid incising this portion of the capsule, as, on account of its intimate adherence to the insertion of the muscle, it is always divided simultaneously with it. Even in the subconjunctival operation, although the conjunctiva which covers this portion of the capsule is left intact, the capsule itself is divided along the whole breadth of the insertion of the muscle. This vertical incision of the capsule of Tenon, which always takes place simultaneously with the tenotomy, is the cause of the retrocession of the anterior part of the capsule covering the muscle, and of the annular portion of the capsule which keeps the muscle fixed, and consequently, also, the retrocession of the muscle itself. By increasing the length of the incision in the capsule (Graefe's division of the lateral process), we may certainly produce a somewhat greater retrocession; but, owing to the second point mentioned above, it cannot be very extensive. For the connection of the conjunctiva with the capsule does not permit a more considerable retrocession of the latter, unless we make an extensive vertical incision in the conjunctiva, analogous to that in the capsule, and thus jointly di-

vide the conjunctiva, capsule and tendon. Such a proceeding is, however, accompanied by considerable disadvantages. On account of the connection between the muscle, capsule and caruncle, the divided muscle draws the caruncle and the semilunar fold backwards and inwards, as well as that portion of the conjunctiva which was divided by the vertical incision. In consequence of this, these parts assume the same position when the eye looks straight forward, which they do in the normal eye when it is turned very far inwards. At the same time, the distance between the semilunar fold and the inner edge of the cornea, is increased, as also the portion of sclerotic visible at the inner angle of the eye; and this gives to the eye that peculiarly disagreeable appearance which was so characteristic of the old operation.

In order to obviate these disadvantages, and yet obtain a much more considerable effect, I am in the habit of performing the following modification of the operation for strabismus, which is based upon the above considerations.

If the internal rectus is to be divided, I raise, with a pair of forceps, a fold of conjunctiva at the lower edge of the insertion of the muscle; and incising this with scissors, enter the points of the latter at the opening between the conjunctiva and the capsule of Tenon; then carefully separate these two tissues from each other, as far as the semilunar fold, also separating the latter, as well as the caruncle, from the parts lying behind. When the portion of the capsule which is of some importance in the tenotomy, has been completely separated from the conjunctiva, I divide the insertion of the tendon from the sclerotic in the usual manner, and extend the vertical cut, which is made simultaneously with the tenotomy, upwards and downwards—the more so if a considerable effect is desired. The wound in the conjunctiva is then closed with a suture.

The same mode of operating is pursued in dividing the external rectus; and the separation of the conjunctiva is to be continued as far as that portion of the external angle which is drawn sharply back when the eye is turned outwards.

The following are the advantages of my proceeding:

1. It affords the operator a greater scope in apportioning and dividing the effect of the operation between the two eyes.

2. The sinking back of the caruncle is avoided, as well as every

trace of a cicatrix, which not unfrequently occurs in the common tenotomy.

3. There is no need for more than two operations on the same individual, and therefore of more than one on the same eye.

With regard to point 1, we may, if we choose, produce either the effect of the common tenotomy, or we may correct a deviation of four lines, or even more, in adults, and of five lines, or more, in children. In order to prevent the repetition of misunderstandings which have arisen from my *viva voce* statements, I would remark, that it is by no means my intention, when the squint is so considerable in degree (four lines in adults, five lines in children), to perform in all cases only *one* operation. Indeed, in such cases, I entirely agree with the principles laid down by Von Graefe, viz: to divide the effect of the operation between the two eyes. It is only in exceptional cases, in which the mobility inwards of the squinting eye is much increased, and the aperture between the lids is not wider than in the other eye, that I correct so considerable a deviation by one operation. If certain personal considerations—as, for instance, the departure of the patient—render a repetition of the operation impossible, I prefer a single modified tenotomy to the proceeding adopted by other surgeons (*e. g.*, at Moorfields Hospital), viz: the simultaneous division of both internal recti muscles. If the deviation amounts to three lines in adults, or four lines in children, I generally perform only one tenotomy. It is probably chiefly owing to the possibility of curing a squint of this extent by a single operation, and without any sinking of the caruncle, that the prejudice against the operation for strabismus, which I encountered, not only amongst the public, but even in the medical profession, when I first settled in Paris, has now nearly entirely disappeared. So I am able, by this mode of operating, to correct the deviation in those cases in which the patient, owing to this prejudice, would never have consented to an operation upon both eyes.

With regard to point 2, I need only mention that the suture is to be applied in all cases. I think it of consequence that the conjunctival wound should be completely closed, and in such a manner that the conjunctiva reassumes its original position, so that the edges of the wound can not be shifted from each other. If the finest English black silk and fine curved needles be used, no dis-

advantages can accrue, even if it should be necessary to apply several sutures.

But I consider the third point—the avoidance of more than two operations upon the same individual—as the most important. I hope that all surgeons who agree with me as to the disadvantages of a third or fourth tenotomy will adopt my mode of operating in all cases of very considerable strabismus. The permanent effect must not, however, be estimated according to the immediate, but the ultimate, result; for the difference between these two is far greater in the modified operation (more especially if it be done extensively) than in the common one; and this applies not only to the deviation, but also to the loss of mobility, which is very considerable immediately after the operation, subsequently diminishes more and more, until it finally does not in the least exceed that which follows the common operation.—*Br. Med. Jour.*

The Restraining Nerves—a Contribution to Nervous Pathology. By Drs. A. Eulenburg and L. Landois.

Although, until recently, only two great groups of nerves were recognized, the sensory and the motor, yet latterly a third group, the restraining nerves, has been added to the former. The elucidation of the diseases of these restraining nerves is the subject of the present paper.

Under restraining nerves are included all those that interrupt, anywhere or anyhow, irritation produced or movement originated elsewhere. Their function, therefore, consists in the staying of movement. These nerves, like all others, are liable to disorder, both in their active and in their conducting apparatus. Besides these central ganglia and fibres, the restraining system possesses also special peripheral terminal organs, to which the restraining impulse excited in the centre or in the conductor is directed, and in which it is fulfilled. The terminal organs appear to be ganglia, standing in relation to the motor apparatus.

The nature of the disorder may be either to increase or diminish the proper functions, as in the nervous system elsewhere.

The range of these nerves comprises four systems, in which the restraining action has at present been clearly shown by physiology. They are:—

1. The restraining system of the heart movements (cardiac, or that of Weber and Budge).

2. The restraining system of the respiratory movements (respiratory, or Rosenthal's).

3. The restraining system of the intestinal movements (peristaltic, or Pfluger's).

4. The restraining system of the reflex movements (reflex, or Setschenow's).

Corresponding to these are restraint neuroses of the heart, the respiration, the peristaltic movements, and of reflex action.

1. The restraint neuroses of the heart.

Their physiological basis is the experiment of Weber and Budge, showing that irritation of one or both vagi diminishes or wholly arrests the heart's action.

In pathological conditions, a restraint producing irritation of the vagus can be excited at many points, although a direct irritation is uncommon, and an indirect or reflex one much more frequent. The direct irritation is seldom excited in the trunk of the nerve, or in its centre, in the medulla oblongata; more frequently in the peripheral ramifications of the cardiac branches in the heart itself. In central irritation the violent further symptoms that are produced obscure the characteristic signs of vagus irritation. The same occurs also in the case of the so-called heart poisons, such as the salts of gallic acid, cyanide of potassium, and others; and in complicated brain disorder, such as concussion and tubercular meningitis. Neuroses of the vagus form a part of the diseases comprised under the vague term, "angina pectoris."

The physiological type of a reflex heart neurosis is furnished by the well-known crushing blow experiment of Goltz. In this the irritation proceeds from the sensory nerves of the abdominal organs. Pathological cases that admit of the same explanation are sudden deaths from concussion of the abdomen, or from the passage of a catheter. To the same category belong many cases of angina pectoris due to irritation of abdominal organs, and attended by lowering of the heart's action, anguish, syncope, cold pale skin, and fallen countenance. So also do the effects of wounds of the intestine, many cases of (especially toxic) gastritis, of nervous gastralgia with lowering of the circulation, of stoppage or intussusception of the bowels with similar symptoms, of colic from biliary or renal calculi, and of peritonitis. The slow pulse of lead

colic also depends upon vagus irritation. In all such cases death ultimately depends upon paralysis of the abdominal vascular system, as Goltz, in his blow experiment, has clearly proved. Mention should further be made of certain forms of nervous shock to the heart, with diminution of its functional activity from some abnormal irritation of the genitals, as in onanism and hysteria.

2. The restraint neuroses of the respiration.

The physiological facts that underlie these disorders are not so free from doubt as those that relate to the heart; but they are, nevertheless, certain enough. They rest upon the experiments of Rosenthal, which teach that slight irritation of the superior laryngeal nerve diminishes the frequency of the inspirations; that stronger irritation entirely stops them, with relaxed diaphragm and closure of the rima glottidis; and that the strongest irritation produces contraction of the expiratory muscles. In this way cough is occasioned, and, in the higher degrees of irritation, spasmodic cough.

Rosenthal considers the superior laryngeal to be a restraining nerve for the inspiratory movements of the diaphragm. Its excitation is not centrifugal, like that of others, but centripetal; and its restraining centre is certainly not, like theirs, in the peripheral organ, but in the medulla oblongata, so that an analogous direction of action is maintained.

Pathological conditions dependent upon restraint neuroses of the laryngeal nerve are numerous. Prominent among them are the spasmodic coughs, both the hysterical (a pure neurosis) and whooping-cough, which the authors hold to be an infectious neurosis. Again, there are the attacks of cough brought on by foreign bodies and by material changes in the air-passages.

3. The restraint neuroses of the intestinal canal.

These have their physiological analogues in the stoppage of the peristaltic movement, and the relaxed state of the intestinal walls from irritation of the splanchnic nerves, as first observed by Pfluger, and since confirmed by others. The restraining irritation is probably conveyed to the plexus that is placed between the muscular layers of the intestine, and that supplies the intestine with motor fibres. The characteristic of neuroses of the splanchnic nerves, is the diminution or arrest of peristaltic action, producing retarded evacuation or complete stoppage of the bowel. These symptoms, however, correspond to those of paralysis of the

motor nerves. It is difficult in concrete cases, therefore, to decide which of the two causes is in operation. Very often there is a combination of both.

An example of irritation of the splanchnic nerves is furnished by the typical symptoms of lead colic, which are pain and obstinate constipation. The first may be very well attributed, in part at least, to irritation of the splanchnic nerves, since they contain sensory fibres. This irritation may itself strengthen the restraining influence by reflex excitation. The active character and the source in irritation of the costiveness are shown by the familiar therapeutic action of antispasmodics. It would certainly have the same character if caused, as some assume, by spasm of the intestinal muscles; but in such case it could only be reflex, and excited through the attacks of colic, and it would probably only occur periodically, and not occasion constipation of so obstinate a kind.

Besides the attacks of pain, and the relief afforded by antispasmodics, the presence of irritation of the splanchnic nerves is further denoted by a similar action upon other restraining nerves, especially the vagus; from which, in half the cases of lead colic, we find marked retardation of the pulse. The distension of the abdomen, again, indicates paralysis of the intestine. The reputed spasmodic contractions are probably only consequences of the pains, and are partly only apparent, and only affect the large intestine, upon which the splanchnic nerves appear to have no restraining influence. They may also be produced secondarily through the irritation of the mechanically-distended bowel, as we see in cases of internal obstruction.

It is probable that the psychical influences that modify the intestinal movements (as in hysteric meteorismus) follow the track of the splanchnic nerves, although their centripetal course, beyond the thoracic sympathetic ganglia to the cerebro-spinal centre, is not certainly known.

4. The restraint neuroses of reflex action.

The restraining action of the will upon reflex movements, and their promotion by decapitation, have long been known. Setschenow was, however, the first to determine experimentally the reflex restraining centre in the brain of a frog, in the corpora quadrigemina, and optic lobe. An analogous office is in the highest degree probable in mankind. The diseases of this restraining ap-

paratus may serve to explain many spasmodic conditions—such as epilepsy, chorea, tetanus, and paralysis agitans. According to Malkiewiez, we may consider the spasms produced by poisoning with strychnia, alcohol, and opium, to be results of paralysis of the reflex restraining centre, upon which all these substances exert a decidedly paralysing influence. [*Wein. Med. Wochenschr.*, *Half-yearly Abstract, July–Dec.*, 1866.

Good Samaritan Hospital. SURGICAL CLINIC, BY PROF. BLACKMAN. *Exsection of the Knee-Joint for Gun-shot Injury.* (Reported by G. W. Haile M. D., resident physician.)

James Trail, æt. 35, native of Ireland, was admitted October 5th, 1866, having a diseased condition of the knee-joint, the result of a gun-shot wound received in the battle of Chickamauga, September 19th, 1863. The ball entered the limb on its external aspect, just above the condyles of the femur, and passed downwards through the knee-joint, and upper end of the tibia, making its exit on the inner and anterior aspect of the leg, about nine inches below the tuberosity of the tibia. The lower opening soon closed, but considerable pain and swelling continued just below the knee, and openings formed, through which, from time to time, were discharged large quantities of pus, and fragments of necrosed bone. The leg became somewhat atrophied, and there was firm anchylosis of the joint. The patient, on admission, being in an anæmic condition, was ordered iron and a generous diet, under which his health soon began to improve, and on the 15th of October, Prof. Blackman operated for the removal of the dead bones, which could readily be felt with the probe. A crucial incision was made along the outer aspect of the joint, when some detached fragments of bone were found and removed, as was also the outer portion of the head of the tibia, which was in a carious condition. The wound healed very kindly, and the parts seemed, for a while, to be in a healthy condition; but in the course of a month from this operation the patient suffered at times violent pains in the part, and on the 20th of November, a large collection of pus had formed in the joint, nearly a pint, mingled with fragments of necrosed bone, having been discharged during the 24 hours. His health

began again to fail, but under the influence of tonics and a generous diet, it was so far improved on the 14th of December, that Prof. B., in the presence of the class of the Medical College of Ohio, exsected the knee-joint. An incision, resembling the letter H, was made on the anterior aspect of the joint, exposing the articular surfaces of the tibia and femur. With the ordinary amputating saw, an inch and a half of the condyles of the femur, in a softened and carious condition, were removed, and about one inch of the head of the tibia. The bone-gouge forceps were then employed to take away every suspicious looking portion, and to round off the posterior margins of the divided surfaces, so as to render the popliteal vessels less liable to injury. The patella was removed. As the leg had been for a long time somewhat flexed upon the thigh, it was necessary to resort to considerable and prolonged force to overcome this contraction. At length the ends were found to be in apposition, and none of the soft parts included, when the flaps were brought together and the limb placed in a neat and carefully padded fracture box. During the operation the loss of blood was trifling, but shortly after the patient had been removed to his bed, considerable hemorrhage occurred. It appeared to come from no particular vessel, but there was a general oozing from the cut surfaces which lasted several hours. The dressings were not disturbed for four days, the blood being wiped away as far as practicable, with a sponge, while the odor of that which could not be removed without disturbing the parts was corrected by disinfectants. Cold applications were applied over the joint, but little irritation followed, and the transverse incision healed by primary adhesion. A little pus was discharged for several days through the lateral incisions, after which it became very slight, and on the twenty-first day the entire wound seemed to have almost perfectly united. On the eighteenth day after the operation there was secondary hemorrhage from a small superficial vessel, and about ten or twelve ounces were lost before it was discovered. It was readily controlled by pressure. Although perfect union between the tibia and femur seemed about this time to have taken place, the patient was ordered to remain perfectly quiet until the end of the eighth week, when he was allowed to walk about on crutches. Just ten weeks from the operation he left for his home in Ironton, Ohio, and from a letter since received from him he seems highly pleased with the result of the operation.

In commenting upon the above case, Prof. Blackman spoke of the few successful cases which had been reported of exsection of the knee-joint for gun-shot injuries, and stated that the patient had come to the city for the purpose of submitting to amputation of the thigh. Having reason to believe, from the opportunity afforded of examining the parts, at the time of the operation for the removal of the sequestra, that the osteitis and carious condition of the head of the tibia and the condyles of the femur were limited in their extent, he had urged the patient to try the results of exsection, having promised him that if, after he had made the incisions required for this operation, he should find the bones so extensively diseased as not to warrant an attempt to preserve the limb, he would then remove it by an amputation through the thigh. The exposure of the diseased parts had satisfied him that exsection was the proper operation, and he predicted that should he recover he would have a most excellent and useful limb. He referred to the testimony afforded us upon this subject by Sir. Wm. Fergusson, Mr. Butcher, the President of the Royal College of Surgeons in Ireland, and others, who had extensive experience in this operation. He spoke to the class of the great importance of allowing the limb to remain undisturbed, during the after treatment, so as not to interfere with the osseous union between the tibia and the femur. He had removed the patella in accordance with the practice of the authorities already quoted, as when left behind, it had frequently become carious, thus requiring a second operation. Prof. B. directed a generous diet, with proper attention also to the secretions.

Legouest, in his *Traite de Chirurgie d'Armee*, (Paris, 1863,) p. 750, observes:

"Resection of the knee for gun-shot injuries has, to our knowledge, been performed seven times: 1st, In the Schleswig-Holstein war, by the advice of Stromeyer: 2d, In the Indian campaign; 3d, In a London hospital; 4th, Ditto, in a hospital in Birmingham, England: 5th, By Textor: 6th, by Laken, before Sebastopol; 7th, by Verneuil, in which operation we assisted. All, but the last patient, are dead. Vernueil's patient recovered in three months, and had a useful limb."

Legouest adds, that judging from the above facts, resection would seem to be equally grave, if not more so, than amputation, but he admits the cases then reported v ere insufficient to enable us to form

a definite judgment. In the field, circumstances are highly unfavorable to the success of the operation.

Prof. Hamilton, in his *Treatise on Military Surgery* (Ed. 1865,) p. 513, thus remarks:

"The following example we believe to be the only successful case of excision of the knee-joint, made for gun-shot injuries, ever yet placed upon record. . . . . A man, æt. 20, was wounded in the right knee, October 22, 1862. . . . On the second day after the injury, Dr. Bontecue removed one and a half inches of the lower end of the femur with a saw; and with a pair of bone forceps cut away the articular surface of the tibia, until the bone was exposed. The patella was dissected out. A portion of the wound healed by the first intention. On the twenty-eighth day the wound had entirely closed; and at the end of a little more than two months from the date of the operation the patient was discharged. There was then "no pain or tenderness about the joint." Several other exsections at this joint have been made by our army surgeons for gun-shot injuries, but so far as we are informed, no other cases have been successful."

Dr. Bontecue heard from this patient in 1865, and he was still in good health.

In the Jacksonian Prize Essay for 1865, on *Diseased Conditions of the Knee-Joint*, by W. P. Swain, Esq., and published in the *British Medical Journal*, we find in the number for November 17, 1866, p. 542, the question of excision in gun-shot wounds, of this articulation thus briefly noticed: "In cases of gun-shot wounds, where severe damage is done to the osseous structure, I think, from the slender information we have, that the proceeding is of very doubtful utility. Hodges has collected the history of twelve cases; and of them only three recovered, and one of these only at the end of twenty months, during which time dead bone was constantly exfoliating."

On the Treatment of Rheumatic Fever. By J. BIRKBECK NEVINS, M. D.

Dr. Nevins, in reference to a growing tendency to consider that it is a matter of indifference whether anything at all is done in

rheumatic fever, except to keep the patient quiet in bed, and supply moderate nourishment, submits a plan of treatment which he has long practised, and which it appears to him has led to the following results:—1. Speedy relief of the patient's most urgent symptoms; 2. Diminution of the general duration of the case; and 3. Restoration of strength, with less tendency to heart-complications or relapses than usual.

The remedies to which he attaches importance are:—

1. The vapor-bath, and subsequent cold douche; and
2. The combined use of quinine and iodine.

In a case related, the bath was given in bed, for the patient could neither turn in bed nor move his limbs; "and," writes Dr. Nevins, "it will generally be necessary to give it in bed, in the first instance, in any case deserving the name of rheumatic fever; and it is so easily administered, that no difficulty can arise to prevent its employment in every case.

"Two large pieces of coarse flannel (common scouring cloths answer the purpose admirably)," he continues, "are to be soaked in common vinegar;* about a pint being necessary for each cloth. Two common bricks are then to be heated nearly red-hot, in the fire, folded up in these flannels, and placed on two plates. The patient being stripped, one plate is to be put a little distance from one knee, and the other a little distance from the opposite shoulder, and the patient is to be covered over with the bed-clothes. In a few minutes, he is surrounded by a most refreshing steam bath, which produces a warm, agreeable perspiration, that may be kept up for twenty minutes or longer, if the bricks retain their heat sufficiently.

"As soon as it is decided to remove them, the patient, still in bed, is to be very rapidly mopped all over with towels wrung out of cold water, then immediately wiped dry with dry towels, supplied with a warm shirt or flannel garment, and covered with a fresh dry sheet, &c., or with blankets alone, as may be most agreeable to him.

"The effects of this bath are a speedy relief of the acute pain, and frequently easy sleep for a time; an abatement of the offensive and distressing acid sweats; and a general state of greater comfort.

"The cold water application immedately on the removal of the hot vapor is very important; as it prevents the continuance of an enfeebling perspiration after the hot bath.

"The manner of removing the patient's bed garment is a point

* For many years I soaked the flannels in simple water; but the vinegar is so much more fragrant and agreeable to the patient, that I have always used it for the last few years.

of importance in cases of such painful helplessness as rheumatic fever; and it is accomplished without pain to the patient or difficulty to the nurse, by an extremely simple contrivance. The clothes must be torn down the back from top to bottom; and when this is done they can be removed and replaced as easily as a child's pinafore, without even lifting a limb of the patient or disturbing him in bed. By this means, fresh, clean, dry clothing can be applied without difficulty, once or twice a day, according to the amount of sweating; and the sufferer is relieved from the discomfort of his damp, offensive garments.

"This bath may be repeated twice a week; and during seventeen years that I have been in the habit of adopting it, I have scarcely ever had to use it a third time in bed; the patient, after the second bath, being almost invariably able to sit up and have the third in a chair.

"When he is able to sit up, a steam-bath can be given with great ease, by putting a bucket of boiling water under a chair, the seat of which is sufficiently protected to prevent the patient from being scalded whilst he is sitting upon it surrounded by blankets; and, by putting a red-hot brick into the water, in the course of ten minutes, the steam is kept up, as by this time it generally begins to abate from the original boiling water.

"A jug of cold water may be poured over the patient when the blankets are removed, or he may be wiped by cold wet towels, as is most agreeable to his own fears or feelings, and he must then be clothed and sit up for a few hours.

"The second part of the treatment upon which stress is laid, is the combination of moderate—*i. e.*, two-grain doses of quinine, with five-grain doses of iodide of potassium from the first. The theoretical grounds on which quinine was first proposed have been already mentioned; and the general experience of the profession will suggest the explanation of the probable benefit to be looked for from the addition of the iodine."—[*Br. Med. Journal.*

Illustrations of Mental Disorder in Puerperal Women. By H. P. AYRES, M. D., Fort Wayne, Ind.

Mrs. B., aged 34, a woman of fine intellect and the mother of six children, supposed herself to be four or five months advanced in pregnancy, and requested my attendance.

Judging from the history of the case, and from her general appearance, I expressed my doubt as to the existence of pregnancy.

At about the time when parturition might be expected, according to her calculation, I was sent for in great haste, and found upon arrival all the paraphernalia proper to such an occasion, in the most complete order. The lady had taken her bed, and was suffering from severe, regular pains, at the same time manifesting much anxiety as to the result of the labor. Neither careful examination, *per vaginam*, nor abdominal palpation, indicated the presence of a fœtus. I communicated to her the result of my examination; but she would not be convinced of the truth of my assertion, and persisted in her useless labor. After the administration of a full dose of morphia, the pains ceased and she passed a comfortable night. On the following morning I found her sitting up, quite well, but exceedingly mortified at the proceedings of the previous night.

Notwithstanding this lady had passed through five confinements, and consequently was acquainted with all the peculiarities of gestation, and had been assured that she was not pregnant, yet she imagined she had all the phenomena of her former pregnancies; she had noted the time of her supposed conception and its progress; the enlargement of the abdomen—there was a slight enlargement; had made all necessary preparations for approaching parturition; and so fixed in her mind was the illusion, that it did not vanish until she had completed the mockery of a confinement.

Mrs. L. is a lady of excellent moral character, and of, perhaps, more than ordinary intelligence, of sanguine-nervous temperament; she is erect—taller than the majority of women, and finely developed in every respect. She is the mother of seven children. Her confinements were usually short, and the convalescence therefrom rapid and perfect. Nothing of an unpleasant character had ever existed between her husband and herself.

Six weeks after the birth of the seventh child she sent for me, and confidentially informed me, that her husband was unfaithful to her, and that he clandestinely met a young lady, naming her, for an improper purpose. Feeling satisfied that neither party mentioned was guilty of the charge made, I attributed the fears of the lady to some mental aberration. At length, she imagined the young lady visited her house at a particular hour during the night. At midnight, or just before one o'clock, she would awaken with an oppressive sense of suffocation, which she supposed to be the effect of chloroform administered to her by the recreant parties. Upon awaking, she would arise and make a thorough search through the house, after which, finding her husband in bed, she would torture

him with upbraidings for his infidelity. She advised the mother of the young lady to observe the conduct of her daughter, but as the parties were not acquainted, the subject was treated with silence. The husband became so annoyed at the conduct of his wife that he determined to abandon her, notwithstanding he was assured her mind was diseased, and that she would ultimately recover.

Venesection produced a temporary relief, a weakening of the patient, and then a recurrence of the aberration in increased intensity. Tonics and opiates lessened the severity, but increased the continuance of the paroxysms. Antispasmodics were more effectual in regulating the mind, and were doubtless the proper remedies in this case. The child was weaned, and the lady recovered in three weeks. She has been confined twice since: the first time manifesting some return of her former trouble, but this was controlled by the use of antispasmodics; the second, no return of the difficulty.

The prominent features of this case are:

1st. The marked periodicity of the attacks.

2nd. The general health of the lady, and the continuous flow of milk.

3d. The subsequent return of the difficulty, and the remedies used; and further, the fact that ever since the first attack, a period of seven years, she has been awakened a few minutes before one o'clock, in the night preceding the appearance of her courses, with the same sense of suffocation that attended her awakenings during the period of her insanity.

The case suggests the question: does not the flow of milk always continue in puerperal mania, when lactation is the exciting cause? I think it does. Yet, the irritation of nursing may induce a state of disease and the milk cease to flow; but, in such cases, the primary cause of disease ceases, and mania may arise from a secondary cause, or from the debility superinduced by lactation. I am persuaded, from cases which have come under my observation, that the period of lactation may be greatly lengthened by the judicious us of anti-spasmodic remedies, either alone, or in combination with opium.

Mrs. K., æt. 19, of slender frame; medium stature; dark hair and eyes; of very reserved and modest demeanor, and a kind mother.

Soon after the birth of her second child, she imagined that her

husband was unfaithful to her; and determined upon destruction of herself and children. It was necessary to keep constant watch over her to prevent her from accomplishing her purpose. In the early part of her sickness she was gentle and submissive; in the latter part resisting and disobedient. Soon after the first manifestation of disease, there was a cessation of the lacteal secretion; she became anæmic, and to some extent emaciated; the tongue was coated; pulse quick; but there was no considerable loss of physical strength. Under the use of proper remedies the tongue cleaned, but there was no abatement of the mental disturbance. This case was controlled by the administration of Dover's powder, quinine, cit. of iron and quinine, ext. hyoscyamus, fl. ext. valerian, changed according to circumstances. These remedies, with wine and nourishing diet, constituted the treatment and the patient was fully restored to health after two months. She has since passed through a period of nursing without any return of the difficulty.

Mrs. H., æt. 23, short in stature, well formed, accustomed to an active life, was nursing her second child when her mind became disordered. A member of her family had shown some signs of insanity, but from what cause, or for how long a time, was not known. While nursing her first child, Mrs. H. had experienced some slight mental derangement. Mania did not occur in the second nursing until after two or three months from the birth of the child, when an abscess commenced forming in the left mammary gland.

The abscess was lanced without pain or excitement being manifested by the patient, but on the day after the lancing, she imagined her husband intended to murder her children and herself, and would admit only one or two of her friends into the room in which she had confined herself. She had paroxysms of violent raving, which were not regularly periodic. Sometimes the intervals between the attacks would be of two or three days' duration; but they gradually lessened until paroxysms were of daily occurrence, occasionally continuing for five or six hours. During the intervals she was docile, and sane on all subjects excepting the one above-mentioned. She was sent to an asylum for the insane, where she remained two years, and was finally discharged as incurable. In this case there was no excess of milk; no disease of the alimentary canal or of the liver; no emaciation or anæmia.

Did the mammary abscess develop a latent hereditary insanity which neither confinement nor lactation could awaken? Cases of mental derangement occurring during lactation are generally attributed to an over, or defective, secretion of milk. I know of no case attributable to such a cause. I have known women to nurse their children for two, or even three years, and suffer no inconvenience therefrom. I have known others with an equal external appearance of health, in which mania appeared after a short period of nursing.

The question occurs, is lactation as frequently the cause of mania as is generally supposed, and do we not often resort to weaning when nursing in itself, has no connection with the state of the mind?

Inunction in Scarlet Fever. By THEOPHILUS PARVIN, M. D.

Inunction of the entire surface, in case of scarlet fever, should be regarded as one of the most valuable therapeutical means in the treatment of this malady. And yet we doubt whether it is so generally resorted to as we think it should be, by the great mass of the profession. This doubt will justify our making a few remarks in regard to this treatment.

Dr. West—*Diseases of Children*; Fourth American edition, Philadelphia, 1866—speaks of it most highly, believing that its use considerably lessens the desquamation, and diminishes the risk of albuminous urine, should it occur, assuming a serious character. For the purpose of inunction, he advises suet, and directs the application to be made twice a day during the development of the rash, and once a day during its decline. And we have observed this practice invariably pursued in the hospital for sick children, London, with which Dr. West is connected.

Mr. Gee,—*Reynold's System of Medicine;* article Scarlet Fever—speaks of greasing the skin once or twice a day, or oftener, bringing comfort to the patient.

Scoutteten regards inunction as a valuable prophylactic against some of the *sequelæ* of both measles and of scarlet fever. He advises either oil of sweet almonds, or olive oil, first slightly warmed by means of a water-bath, to be applied by means of a small piece of flannel, with gentle friction, over the entire surface except the

face and feet. In the morning the patient should take a warm bath, and then, when well dried, the inunction should be repeated. "These two frictions and a single bath are often sufficient to remove all danger. Nevertheless, when the measles, and especially the scarlatina, may have been very severe, when the dead epidermis is not completely detached, when the skin remains dry and covered with bran-like scales, resort again to the oil and bath, until the suppleness of the skin is restored."

As to the kind of fatty substance or fixed oil, that is used, we do not think it material. We have used suet, olive oil, linseed oil, and even castor oil, and the beneficial results were equal, though probably one of the oils recommended by Scoutetten would be the least unpleasant; but certainly we would not counsel the bacon-rind, as advised by Schneemann, in the extract which we shall give, in a few minutes, from Hebra's recent work—while still less would we approve of the *philochthonia* and *hydrophobia* indicated in the sentence: "The linen is not to be too often changed, and no water is to be allowed to touch the skin."

The directions given by Dr. West as to frequency of repetition of annointing, and as to bathing, furnish the best rules to be followed.

Now, how does inunction do good? That it does it can scarcely be doubted, after the testimony adduced; certainly will not be, so far as the comfort of the patient is concerned, by any practitioner who will have his next scarlatinal patient, when wakeful and restless with the heat and itching of the skin—burning and itching which the warm bath, or tepid sponging, can relieve but only temporarily—carefully anointed with warm olive oil, for the transition from restlessness and discomfort to comparative ease and quietness, will be an unequivocal and conclusive proof that we can thus render such patients much more comfortable; and in self-limited diseases, simply accomplishing this end is no little matter. But the promotion of this end is not all that inunction accomplishes. Years ago, when bacon-rind, almost exclusively, was used thus, one of our medical friends in Indianopolis, explained the beneficial results by the sedative influence upon the skin, of the creosote in the rind. But the fact that any of the other fats, and that fixed oils answer just as well, completely destroys the hypothesis. We have in scarlet fever, increased determination of the blood to the surface, and increased skin-life, with greatly increased production of effete matter, in the shape of epidermic scales, etc. May not

these, accumulated and hardened upon the surface, be themselves a source of great irritation, exciting cutaneous *hyperæsthesia*, and obstructing cutaneous elimination? The oil softens this external layer, the bath removes it in part, and hence the integrity of the skin-functions is maintained, and thus, in part, the scarlatinal poison eliminated, without the kidneys becoming so seriously implicated, as they frequently are in this disease.

Certainly this supposition corresponds with the statement which we have quoted from Dr. West, in reference to the lessened desquamation, and the diminished liability to serious renal diseases which he has observed in those patients in whose treatment inunction has constituted an essential part—an observation which we believe will be confirmed by every practitioner who will follow the same practice and in the same way.

Having said thus much in favor of inunction, we present the following extract from Hebra's recent work, Sydenham Society's translation:

"The method recently proposed by Schneemann, of curing scarlatina by rubbing the surface of the body with bacon, is allied to the plan recommended by Dehne in 1810, of anointing the skin with oil. Each of these authors was led to suggest the practice of inunction by the idea that in scarlatina the principal danger to the patient arises from the functions of the skin being interfered with by the disease in the same way as they are by extensive burns. It was supposed that rubbing oily or fatty substances into the cutaneous surface, would preserve the integrity of the diseased organ, and prevent the occurrence of any secondary affection due to disturbance of the skin's action.

"The directions for the carrying out of this method are as follows: A piece of bacon, as big as the palm of the hand, and with the rind still attached, so as to make it easier to hold, is to be taken, and several cuts are to be made on its under surface. It is then to be vigorously rubbed over the whole of the patient's body, with the exception of the face and head, the application being commenced from the very first day of the disease, and repeated at least twice daily, in the morning and evening. The linen is not to be too often changed, and no water is to be allowed to touch the skin. The patient is to be kept in a moderately cool atmosphere, at a temperature of 61° Fahr. He is to remain in bed as short a time as possible, and to be limited to a sick diet only during the presence of fever,

being allowed to go into the open air by the tenth day, reckoned from the beginning of the disease.

"The inunctions are, however, to be continued for full three weeks without interruption, after which the use of warm baths is recommended.

"It was Schneemann's opinion that by this procedure the disease is made to terminate with the disappearance of the rash, and that no desquamation occurs.

"Although this mode of treatment has already undergone sentence of oblivion, and there have been very few who, like Mauthner and Illisch, have carried it into practice, yet I may, in this place, report the results of my own trials of it. I have carefully followed Schneemann's directions in the treatment of twenty children affected with scarlatina, but I regret to say that I have not seen those good effects which his laudatory statements had led me to expect. The procedure in question certainly did not prevent the appearance of complications, for in two of these patients, *angina gangrenosa* set in; in one, diphtheritis; in two, pneumonia; and in two, dropsy. Nor did I find that this method checked the spreading of the disease by contagion, nor that it prevented the occurrence of desquamation. On the other hand, it is not to be denied that in some cases this treatment relieved the troublesome itching and burning sensations complained of by the patient, and that it removed the dryness and heat of the skin, and made it disposed to perspire. In fact, the benefit derived from rubbing the patient's skin with bacon is very similar to that of ablution with cold water."

Hebra, as our readers are aware, is probably the first of living dermatologists, and therefore his words should have great weight. But we beg our readers to observe the last sentence but one, of the extract, in which he admits some benefit from the application; but we are especially anxious that they should note the special plan, that of Schneemann, which was pursued, and while they may be quite willing to consign such plan, so regardless of cleanliness, and almost of decency, "to oblivion," they will hadly give the same verdict as to the plan presented by Dr. West, for example.

Treatment of Diseases of the Skin. From "Hebra on Skin Diseases," Vol. I. Sydenham Society's Translation. London: 1866.

Although in the course of the last few years great attention has, on all sides, been devoted to this department of medicine, we have unhappily made as yet but little progress toward the wished-for end, the cure of all cutaneous diseases. The cause of this lies, no doubt, partly in the fact that it has been only quite recently, and during a time very short for making exact investigations, that therapeutical experiments have been carried on in a rational spirit, and without bias. For before one can speak of the action of a remedy, in the treatment of any skin affection, two things must be ascertained; the course taken by the disease when left to itself, and the effects which are produced by the remedy when applied to the healthy skin. Our want of success depends also, in part, on our defective knowledge of the dermatoses, and on the small extent to which the pathological chemistry of cutaneous diseases has been cultivated. It seems to us that a very promising field for investigation is afforded by dermatology, to those who are interested in this new branch of science. Unfavorable circumstances have, however, as yet prevented us from exploring it ourselves; and this task must, therefore, be postponed to a future opportunity, or left to other observers.

In the imperfection, or rather, in the complete absence of any rational basis for our therapeutical procedures in the treatment of skin affections, no expedient remains but pure empiricism. For the slight success which we have hitherto obtained, we are indebted entirely to the strictly practical course which we have pursued in this respect. We have tried methods of the most varied description, whether they were recommended by medical men, or by unprofessional persons; and we have some belonging to the former category, less effectual than they were represented to be; while popular remedies, on the other hand, have done us good service.

Before passing on to enumerate the different remedial agents, we shall be permitted to allude to a few deeply-rooted prejudices, which interfere even now, to some extent, and interfered still more formerly, with the employment in practice of certain methods of treatment.

The first of these prejudices, which we must combat, is the dread with which local applications were regarded.

Some years ago we drew attention to the fact that it is quite a

mistake to suppose that the action of remedies applied to the diseased, or healthy skin, is necessarily merely topical, and not general. For we need but to call to mind the contagia of small-pox, syphilis, hydrophobia, and the poisons of serpents, and of the dissecting-room, which are generally introduced through the skin, to prove that it is an organ which absorbs very readily many forms of virus; and that it is equally adapted to absorb medicinal agents also, and to admit them into the circulation, even while the epidermis is intact, can be easily shown during the external use of tinc. of iodine, or of the mercurial preparations.

Now, what can be demonstrated in the case of certain remedies by chemical reactions, ought surely not to be denied *a priori*, in regard to others; and, therefore, we maintain the exact contrary of the principle we have alluded to, and assert that, with the exception of caustics, all remedies which are brought into prolonged contact with the skin, are absorbed by it, and taken up into the fluids of the body.

Hence, we have no fear, in applying topical remedies, of driving in cutaneous diseases, or of producing any other ill effects, for which the practitioners of the old school had various expressions. Our apprehension is rather of a too violent action upon the organism in general, especially in the case of these drugs which are liable to produce derangements of the vegetative processes. Nor have we any dread of curing skin affections too quickly; on the contrary, it is the object of our warmest endeavors, to find means of terminating these diseases as speedily as possible. Were we only in the possession of remedies which produced cures thus rapidly, we should have no anxiety with regard to the appearance from this cause of metastases, or of any other consecutive diseases.

There is another point also, in which we are opposed to our predecessors, and to many of our contemporaries, and that is with reference to the necessity for using, in the cure of chronic skin affections, remedies which are supposed to be *purifiers* of the blood (*hæmato cathartica*).

We have never seen the effects which are ascribed to them by some authors, produced either by the long-continued administration of laxatives and drastics, nor by decoctions of woods, nor by vegetable juices. Again, the internal use of antimonials, baryta graphite, anthrococali, or sulphur; or again, of cantharides, mezereum, viola tricolor, dulcamara, root Laffecteur, or sirop de Larrey,*

* Sirop de Larrey is a preparation composed of elder berries, quiac, China root, sassafras, senna leaves, borage, etc.

has been invariably unattended with the hoped for success, and therefore we cannot recommend to any one the employment of these agents. On the other hand, arsenic has proved in our hands a useful internal remedy, though we cannot praise it to the same extent as do Hunt and Romberg; and we have also seen good effects produced by the preparations of mercury, of iodine, and of iron, by the oleum morrhuæ, by the bitters, and the vegetable and mineral acids; and, lastly, by all those remedies which are indicated in particular cases by the presence of dyscrasiæ, and which would be prescribed equally, although the general affection were running its course unattended by any local disease of the skin.

Externally we make use of simple baths, warm or cold, as required, and of douche baths, and vapor baths; or we add to these baths sulphur, potash, soap, common salt, or corrosive sublimate. Their temperature should be from 66°—100° F. (15°—30° R.); and their duration may vary from several days to a few minutes. Again, we often employ emollient frictions with success, rubbing the whole skin, or certain parts of it, with oily or fatty substances. (such as the ol. Amygdalæ, ol. lini, ol. oliviæ, or ol. jecoris aselli, or lard, suet, glycerine, or spermaceti). In other cases we add to these fatty matters, various active substances, such as the preparations of mercury, zinc, lead copper, iodine, arsenic, sulphur, etc., which remedies, so far as their solubility permits, may also be used in watery or alcoholic solutions. Our sheet anchor, which we invariably employ when we wish to effect either the rapid separation of the horny layer of the epidermis, or the removal of exudations infiltrating the cutis, or poured out beneath the cuticle, is always the soft or potash-soap. This we apply either alone, as in prurigo, eczema, psoriasis, ichthyosis, pityriasis, herpes tonsurans, favus, lupus, etc.; or we blend with it other medicinal agents, such as, for example, sulphur in cases of scabies, tar in cases of eczema, etc. Moreover, an important part of our therapeutical resources consists in the empyreumatic oils, which result from the dry distillation of certain kinds of wood. Thus we make use of the tar which comes from the beach (oleum empyreumat. fagi), of the ol. cadinum, which is derived from the juniperus oxycedrus, and of the oleum rusci, which is obtained by distillation from the wood of the birch (betula alba), and which possesses the smell of Russia leather. The action of these is nearly identical; they differ only in their consistence and in their smell.

For the removal from the skin of exudations, new growths, tumors and the like, caustics are employed. Passing over the actual cautery, of which, as of the knife, the application belongs to the domain of surgery, we will here concern ourselves only with the corrosives and escharotics, of which we shall refer particularly to those whose action we have ourselves thoroughly tested.

The concentrated mineral acids, namely the strong sulphuric, nitric and hydrochloric acids, can be applied in comparatively few cases. Not only is their action inconstant, and therefore unreliable; but better effects are produced by other caustics. Moreover, the disfiguring scars which follow the use of these acids often frustrate the purpose for which they were employed. The same may be said of butter of antimony, of chloride of zinc, and of other similar preparations. There are but few cases in which we use these substances, applying, for example, sulphuric acid in the removal of horny growths, and hydrochloric or nitric acid to destroy old exudations which have become organized. For experience has made us acquainted with better caustics, of which the effects can be more easily regulated, and which are followed merely by thin and smooth cicatrices. Among these we place in the foremost rank the nitrate of silver, which we use either as a solid, or in a concentrated solution (argent. nitrat aquæ distillatæ, partes æquales). To this substance we attach great value, because every kind of new growth can be destroyed by it, without causing any further injury to the patient, and because any one, however unpracticed, can apply it, without having any special experience in its use.

Next to this substance is the caustic potassa of the surgeons; this may be employed either in the form of sticks, or dissolved in two parts of water; but it demands more care in its application than the nitrate of silver; and it also causes a more extensive loss of substance, the limits of which can not be so accurately predetermined. Moreover its use is often followed by thick and raised cicatrices.

Similar effects are also produced by the Vienna paste, consisting of equal parts of caustic potash and quicklime, made into a paste with alcohol, at the time of its application, and left for ten or fifteen minutes in contact with the portion of skin which is to be destroyed. By the chloride of zinc paste of Canquoin (take of chloride of zinc, one part, of flour, four parts, of water, q. s.), the same result is obtained only after the lapse of four hours.

And a longer time still (twenty-four hours or more), is required for the action of the paste recommended by Landolfi, (consisting of chloride of bromine, two drachms, of chloride of antimony, and chloride of zinc, of each, a drachm and a half, besides chloride of gold *ad libitum*) of which the effects are, however, more severe. All these pastes char the organic tissues with which they are brought in contact; and they differ only in respect of the intensity of their action.

We may also attain similar results, though only after repeated applications, by using a powder containing five grains of white arsenic, and fifteen grains of artificial cinnabar, mixed with two drachms of sugar, or with the same quantity of the unguentum rosatum, as may be most convenient.

Again, the solution and paste of Pleuck, consisting of corrosive sublimate, camphor, carbonate of lead, alum, sp'ts. of wine, and vinegar in equal proportions, has been employed with success in the treatment of various growths, especially those of syphilitic origin.

Sulphate of copper, alum, pulvis sabinæ frondum, corrosive sublimate, calomel, etc., are also well-known irritants, which either alone or in conjunction with other substances, may be used with advantage for the purposes of destroying, slowly, growths of various kinds.

Lastly, besides these active remedies, which are used externally or internally in different skin affections, others, which are indifferent and inert, are also frequently prescribed, in those diseases whose course we can not modify, and in which, therefore, the expectant method is attended with the best results. Thus, whether this or that remedy be used, is a matter of indifference, in the contagious exanthemata, as well as in all inflammatory affections of the skin which run an acute course, such as erythema, roseola, urticaria, erysipelas, herpes, miliaria, pemphigus acutus, etc. That mode of treatment which disturbs the patient least, is, in these diseases, always the best.

BIBLIOGRAPHY.

Hysteria; Remote Causes of Disease in General; Treatment of Disease by Tonic Agency; Local or Surgical Forms of Hysteria, etc. Six Lectures delivered to the Students of St. Bartholomew's Hospital, 1866. By F. C. SKEY, F. R. S. London: Longmans.

The London *Times*, February 5, notices the above volume as follows:

"Mr. Skey has published some very able lectures which he delivered at St. Bartholomew's Hospital last year on hysteria. We must leave it to medical men to pronounce upon his treatment of that particular disease; but he has introduced what he has to say of hysteria by two lectures on the treatment of disease in general, and it is within our province to remark upon these. There is an old saying that every man at forty is his own physician if he is not a fool, and there is, at least, so much truth in the proverb that we have all at that age attained to some general notions of what is right and wrong in medicine, and are not content to leave the discussion of medical questions wholly to medical men.

"Now, Mr. Skey's lectures are worth notice, because they are a protest by a distinguished and perfectly orthodox surgeon against the prevailing methods of cure. He is not alone in objecting strenuously to that cathartic system of medicine which seems to regard the liver as the most pestilent member of the human frame, needing constantly to be assisted by blue pills and black draughts. But few medical men have insisted so long and so perseveringly on the worthlessness of drugs as compared with food as a means of cure; for the tonics which Mr. Skey so strongly recommends are curative rather as a food than as medicine. They supply a want in the bodily system, just as wine supplies it; and, in fact, wine is the chief of the tonics which Mr. Skey recommends. 'I consider wine,' he says 'indispensable to the tonic treatment of disease.' And he tells how, in the course of the last forty years, the prescribing of wine to patients has increased in the London hospitals. In the year 1848, the treasurer of St. Bartholomew's, referring to the quantity of wine which Mr. Skey ordered for his patients, observed that the hospital could not warrant the expense. The consump-

tion of wine was then only three pipes a year. Mr Skey replied to the treasurer that he could not treat hospital cases without wine, and that for the credit of the hospital he would do his best to raise the consumption of port wine from three pipes a year to thirteen. And this was the amount consumed by St. Bartholomew's in 1860. A similar change in the treatment prevails, more or less, in every hospital in London; but our author complains that, although the employment of stimulants and tonics, instead of depletive agents, has become so prominent a feature in modern practice, it does not appear to have exercised much influence on the theory of disease as taught in the schools, nor on the practice of the profession among the community.

"The theory on which Mr. Skey proceeds is this. If we inquire into the recent history of any one suffering from illness, whatever form it may assume, we shall hear of something tending to reduce the vital powers of the body, and to cause exhaustion of some sort. There is always a loss—it may be of blood, or of food, or of heat, or of sleep; and the method of cure must consist in making up for the loss. 'I consider the treatment of the great majority of diseases,' says Mr. Skey, 'to consist in increasing the quantity of healthy blood and giving force to the action of the heart. *You can't*,' he continues, and the italics are his own, '*You can't cure disease with a feeble pulse.* Mend the pulse, and nature will do the rest of the work.' He accordingly brings forward a number of examples to show how disease is produced by exhaustion, and is thrown off when the animal economy is properly supported. We can not follow him in these illustrations, but we bring forward one. He states that the late Mr. Jones, of Jersey, was a remarkably successful operator, and in operations for the excision of joints considered to be diseased, succeeded, in a series of twenty-five cases, without the loss of a single case, at a time when in England the mortality among the patients undergoing similar operations was very great, recovery being rather the exception than the rule. What was the secret of this? On making the inquiry it was discovered that Mr. Jones invariably gave every patient on whom he operated at least a pint of port wine on each of the two days following the operation, and he acknowledged that he learned the treatment which had been attended with such remarkable results from his observation of the success which had attended Mr. Skey's treatment of cases in St. Bartholomew's Hospital. This is but one

of the many illustrations which Mr. Skey puts forward, and we hope it is suggestive enough to induce our readers to consult his volume for themselves. If they do, they will find in it some useful hints and much common sense."

In reference to the above we wish to say a few words.

In the first place we object to the rendering of the adage, a man is either a physician or a fool at forty, a form which we prefer to every man is *his* own physician, etc. Certainly we have understood the adage to apply exclusively to the medical fraternity. In the earlier period of professional life, we are disposed to exaggerate theoretical knowledge; in the latter to give undue importance to our individual experience. Sir Everard Home (*On Tumors*) has remarked, "in youth we only publish our professional acquirements—in age we can lay before the public the result of our own professional experience."

But between the two extreme periods of professional life, there lies a sort of table-land, upon which we may be permitted to walk with the light of theoretical and of practical knowledge blending together, trusting to neither alone, but relying upon both to guide us in an otherwise dim and uncertain path. Happy is he who early attains that table-land, and who keeps himself upon it during all his professional career! And if he does not attain it by the time he is forty years of age, he can not be a physician, but he is a fool—hopelessly a fool. But let this difference of interpretation pass.

The *London Lancet* of February 9, in the course of a brief reference to this article in the *London Times*, says that the two ideas which the lay-readers are likely to derive from its perusal are:

"1st. That Mr. Skey is in antagonism to the large majority of his professional brethren in his views of the nature and treatment of disease; and, 2d, that Mr. Skey looks upon wine as a panacea for every disorder."

While we are quite willing to concede that the stimulant plan of treating disease, now getting so much in vogue, may be less mischievous than the spoliative plan once so universal, yet we are not prepared to say that it is not at times productive of serious mischief. The judicious management of stimulants is, as the *Lancet* so justly observes, difficult enough for the accomplished and observant physician. To make disease debility, and this debility to be combated by stimulants, is to irrationally simplify pathology and therapeutics. The fact is, that the office of alcohol in the econ-

omy is not yet fully settled by physiologists. D'Allemand, Perrin, and Duroy, have thought in opposition to a former creed, that it is not a respiratory food, that it acts simply as a local excitant of the tissues—as alcohol it comes into the system, and as alcohol it goes out. On the other hand it is alleged by others, that only a small quantity of alcohol ingested is eliminated; but that it is in a great measure broken up in the economy of the final products, being carbonic acid and water; and in this destructive process temporarily some heat is produced. This physiological influence explains the greater consumption of alcohol in winter than in summer, and greater, other things being equal, among nations, as we advance towards the north.—*Bouchardat.*

But this should be borne in mind, that alcohol does not, or if it does, but in a slight degree compared with nutritious food, increase absolute force; it may evoke it: it is an excitant of the nervous system, transitory in its effects, and followed by corresponding depression. T. P.

Orthopedics; a Systematic Treatise upon the Prevention and Correction of Deformities. By DAVID PRINCE, M. D., of Jacksonville, Ill. 8vo., pp. 240. Lindsay & Blakiston, Philadelphia: Robert Clarke & Co., Cincinnati.

The above most excellent volume, which the publishers have issued in very neat style, has been prepared with special reference to the wants of physicians engaged in general practice. Dr. Prince truly remarks, that outside of the large cities, the majority of patients needing attention, on account of deformities, or diseases, or accidents that lead to them, must find relief at the hands of the profession in their near vicinity, or not find it at all. He adds,

"The proportion of the wealthy, who can be sent a considerable distance to specialists, is so small, in relation to the whole, as to make very little diminution of the number that must be treated at home. This renders it important that there should be a general prevalence in the profession of a knowledge of prevention and treatment, to bring the means of relief within the pecuniary resources of the majority of sufferers. In order to render the advance in knowledge on this subject, gained within the last twenty years, accessible to the mass of the profession, it is necessary that the substance of many valuable essays and monographs should be sifteds

and collected into a few pages, within the means of all to purchase it; and within the time of all to read it. To these ends an attempt has been made to connect the medical treatment with the mechanical, in order to give the work its nearest practical approach to completeness compatible with the necessary brevity."

A work of this kind has long been needed by the general practitioner, and, in our opinion, Dr. Prince has produced the best digest on Orthopedic Surgery to be found in the English language. We hope soon to be able to notice more in detail some of the practical points discussed in this most admirable volume. G. C. B.

Elements of Medical Chemistry. By B. HOWARD RAND, M. D., Professor of Chemistry in Jefferson Medical College. 12mo., pp. 399. Philadelphia: T. Ellwood Zell & Co.; Cincinnati: Robert Clarke & Co.

The author announces in the first paragraph of his preface that "This work is intended, chiefly, for the use of students of medicine, during their attendance upon lectures; it is believed that it will also be found of service to the practitioner."

The principal merit of this book is found in, probably, a successful accomplishment of the object for which it was "chiefly intended." The two objects referred to in the above quotation are somewhat incompatible, unless more space be devoted to their attainment than is comprised in this book. He has at least noted many "general principles, and their application to medicine;" but the modes and details of application have, necessarily, been omitted. Gravitation, Light, Heat, Magnetism, Statical Electricity, Dynamical Electricity, Magneto-Thermo and Animal Electricity, Cohesion, Adhesion, Chemical Affinity, Decomposition, are the topics; the "general principles" of which are carefully and intelligently epitomized. The Part III, includes the more practical part of the "Chemistry of the Elements;" and Part IV, Organic Chemistry. We give a specimen of the author's method of handling his subjects, selecting Iodine as an illustration. It is treated under the various headings of 1st, Natural Sources; 2nd, Properties; 3rd, General Chemical Relations; 4th, Impurities; 5th, Medical Effects; 6th, Officinal Forms. It will be seen that this plan is a comprehensive and practical one, and has been so developed as to answer the author's chief intention, we think, very well. W. C.

Fecundity, Fertility, Sterility, and Allied Topics. By J. MATTHEWS DUNCAN, A. M., M. D., etc. A. & C. Black, Edinburgh, 1866: Robert Clarke & Co., Cincinnati, O.

This handsome volume—a model of clear type, excellent paper, etc.—is, in its valuable contents, worthy a city so long famous for its philosophy and learning as is the Athens of the North. Edinburgh! what famous historic names in Philosophy and in Medicine, does its utterance suggest! Stewart, Reid and Hamilton, and then Cullen, and Gregory, not to mention others, are names that can not soon be forgotten. The very atmosphere of this city is that of science, philosophy and literature; and whether the men of this generation there residing, are doing as much as those of the last, or any previous generation, in the search for truth, and in the establishment of important principles, in the increase of human knowledge, and in the diminution of human suffering, we will not stop to inquire; only saying that while Edinburgh is not as prolific of books as some other cities, yet those that are there published, making any pretensions to scientific character, are not ephemeral—they are substantial, permanent.

Here we have a volume of between three and four hundred pages, written by a physician and for physicians, though of great value likewise to the sociologist, and political economist, and not a single disease described, not a single principle of therapuetics discussed! It is simply an investigation of laws, that Dr. Duncan attempts: from otherwise dreary and useless statistics, he deduces important truths. Whence the inspiration to this laborious work? In medicine itself; which, having yet no immutable and fundamental truths whereon to build, grows only by the slow process of induction. Or, if we would seek some other special and immediate cause, we would find it in that fragment of philosophic history—fragment because its gifted author so early passed away from earth, not a tithe of his ambitious designs accomplished—by Henry Thomas Buckle. Those who have read his History of Civilization will remember what prominence is given to the laws of nature, and the demonstrations which he brings from statistics, of the uniformity of sequence in the prevalence of crime, in given periods, and uniformity, too, in simple aberrations of memory, as in dropping undirected letters into the post-office, making "the regularity of events at once the key and basis of history." In a spirit somewhat similar, Dr. Duncan has investigated the statis-

tics relating to the special topics of which he here treats, and has proved subject to law, some phenomena, of which such subjection would not, possibly, have been anticipated.

Felix qui potuit rerum cognoscere animo.

We wish our space permitted a complete analysis of the book. It does not, and therefore we must be content with presenting a fragment, taken here and there—of course too, we must omit all the statistics and reasoning, and deal only with conclusions.

The climax of fertility in women is reached at thirty years, and then steadily declines: at least three-fifths of the population are recruited from women not exceeding thirty years.

In reference to the fecundity of women at different ages, among Dr. Duncan's conclusions are the following:

1. That the initial fecundity of women gradually moves to a climax, and then gradually wanes.

2. That initial fecundity is very high from twenty to thirty-four years of age.

3. That the climax of initial fecundity is probably about the age of twenty-five years.

The author has made some interesting investigations as to the *length* and *weight* of the newly-born child. Primogeniture has no influence upon the latter; it varies with the age of the mother, finding its climax when she is between twenty-five and twenty-nine. Precisely the same conclusions are established as to *length*.

In investigating some of the laws of the production of twins Dr. Duncan says: Among women the birth of twins occurs about once in eighty deliveries. Triplets, quadruplets, quintuplets, and even higher figures, are occasionally observed; they are very uncommon, and the rarity is progressive with the number. The normal or ordinary rule in women is to bear one child at a time; and the next most frequent condition is temporary or persistent sterility.

From the earliest child-bearing period, till the age of forty is reached, the fertility of mothers in twins gradually increases; there is an exception to this rule, viz: woman in her first pregnancy, is more likely to have twins than she is in the three pregnancies immediately succeeding.

Newly married women are more likely to have twins the older they are,—and numerous other conclusions are given, but we omit them, and proceed to the author's consideration as to the entire *Fertility of Marriages*.

Taking the entire number of children born, there would be a fraction over four for each married woman. Dr. Duncan quotes Franklin as saying, "that the females in America have, one with another, eight children to a marriage;" and plainly expresses his disbelief in the assertion. We suspect Dr. Storer would tell a different story from Franklin's, in regard to "females in America."

But as all marriages are not fertile, ten is the average fertility of fertile marriages, lasting during the whole child-bearing period of life. But supposing marriage to occur at fifteen, and the women remain persistently fertile until forty-five, the average number of children will be fifteen.*

Wives who bear numerous progeny, do so by virtue of two differences from other women; they bear their children more rapidly, and they continue fertile longer.

Will women who marry late in life, continue child-bearers beyond the usual period? This was the teaching of Mason Good and Sadler, who so vigorously attacked the doctrines of Malthus, adopted it. But the immovable figures adduced by Dr. Duncan, utterly demolish it. After fully discussing the Fertility of Marriages, the author proceeds next to consider, in Part V., the *Laws of Sterility of Women*, under the following heads (as time does not permit us to do anything more at present than give a sort of table of contents of the rest of the volume):

"On some Laws of the Sterility of Women; Sterility of Marriages in the Population; Sterility of Wives; Absolute Sterility of Wives; Sterility According to the Ages of Wives; Expectation of Sterility; Relative Sterility; Expectation of Relative Sterility,

Part VI. "Note on Formula, representing the Fecundity and Fertility of Women; Fertility and Fecundity of the Mass of

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* Have our readers ever seen *Pædeirtrophie, or the Art of Nursing and Rearing Children*, written in Latin, 1584, by Scevole de St. Marthe, and dedicated to "His most Christian Majesty, Henry III," of France? One of the first translations, made early in the last century, was dedicated to the famous Dr. Garth; but that which we have was made by Dr. H. W. Tytler, London: 1797. The work contains many valuable and also some curious things; but that which we wished to call attention to now, was that Scevole had not given as much attention to the subject of fertility in women as Dr. Duncan has, for he expected her to produce a child annually, as the last two of the following lines indicate:

"But chief, th' eternal Father's aid implore
To rear that offspring, which he gave before,
Lest the young plant, of late so thriving found,
Should waste, like seed amidst unfertile ground;
That you may still a smiling infant bear,
To crown with pleasure ev'ry circling year."

Wives; Fecundity and Fertility of the Average Individual; Relative Fertility of Different Races.

Part VII. "On the Mortality of Child-bed as affected by the Number of the Labor and the Age of the Mother; the Relation of the Number of the Labor to the Mortality from Puerperal Fever; The Relation of the Number of the Labor to the Mortality accompanying Parturition; The influence of Child-bed Mortality, and specially of the Mortality consequent on Primiparity, on the whole Mortality of Women at the Child-bearing Ages; The Relation of Age to the Mortality from Puerperal Fever; The Relation of the Age of the Mother to the Mortality accompanying Parturition.

Part VIII. "On the Age of Nubility.

Part IX. "The Doctrine of the Duration of Labor; The Duration of Labor in relation to the Mortality of the Mother in Parturition and Childbed.

Part X. "On the Duration of Pregnancy; The Interval between Insemination and Conception; The Interval between Insemination and Parturition; The interval between the Last Menstruation and Parturition; The Prediction of the Day of Confinement; Protraction of the Period of Pregnancy; Dr. Montgomery's Opinions; Harvey's Opinions; Appendix."

MISCELLANY.

Public Executions—Epilepsy. By Dr. J. F. Hibberd, of Richmond, Indiana.

Editors of the Journal—The January issue of the *Journal* contains a short article from Dr. J. C. Reeve, entitled "Public Executions—Epilepsy," the first part of which is taken up with a very proper condemnation of barbarous methods of taking the life of criminals under judicial condemnation, by the headsman in Germany and the hangman in our own country, and he closes a paragraph thus: "one object we have in view is to call attention to the desirability and necessity of throwing our influence, as a profession, in favor of a more humane mode of public execution, '*They manage these things better in France.*'"

One would infer from this that Dr. R. is favorably disposed toward the guillotine, as an instrument for public executions, and certainly all humane persons would join him in its selection, if the instrument must be either it, the gallows, or the headsman's sword. But is there no other instrumentality which shall be as certain as the sword, the gallows, or the guillotine, and yet devoid of the sickening and demoralizing convulsive struggles and spouting blood of these? Can we not devise a method that shall compel the civilized world, while they declare that "they manage these things *better* in France," to say also that "they manage these things *best* in the United States?" Without doubt there is such instrumentality, to wit: chloroform. Its service is absolutely certain, and it will be at hand wherever a judicial execution may be ordered. With chloroform there will be no hacking of the victim's body by the uncertain stroke of the headsman's sword, and no double execution by the breaking of the hangman's rope. By its use all that is most revolting and degrading in public executions will be avoided, and yet nothing of the lesson that public executions are intended to teach will be lost, but, on the contrary, the good that may be derived from them (if any) will be increased tenfold.

One can not help thinking that the day for public executions is gone by; that a higher intelligence and Christian enlightenment should suppress them. If any person still supposes that the witnesses of a public execution are less likely to commit crime for having gazed upon such a spectacle, such person must be set down as having a very inadequate knowledge of human nature, and it is quite certain that diligent inquiry would convince him that these shocking exhibitions tend to precisely the opposite effect.

No matter, however, whether executions are public, or take place in the presence of the necessary judicial witnesses only, every thing conspires to teach that they should be done in the most humane and least revolting manner. As the nations have become more civilized they have ceased to bury criminals alive, ceased to throw them into the dens of wild beasts; to nail them to the cross; to burn them at the stake and break them on the rack; to tear them asunder by horses or machinery; and to torture them before they were beheaded or hung. Now, let us in this country proclaim a still higher civilization, by abandoning the present gross and debasing method of inflicting capital punishment on criminals condemned to death, and by substituting the refined and

humane instrumentality of chloroform. And let us hope that the medical profession will realize the propriety of throwing their influence in favor of this best mode of carrying out all judicial death-warrants.

Dangers of "Chignons."

"We should be sorry to say anything that would unnecessarily disturb the peace of ladies in their compliance with the present remarkable fashion of wearing *chignons*. This custom may seem very irrational to the male half of mankind, but this objection would apply to many of the fashions by which ladies consider that they adorn themselves, and so must not count for much.

"A more serious objection, and one more calculated to have weight with English ladies, has been started, according to a correspondent of our own, by a Russian professor, M. Lindemann.

"According to this authority, seventy-five per cent. of the false hair used for *chignons*, and similar purposes, in Russia, is infested with a parasite to which he has given the name of Gregarine. The gregarinous hair, it is said, is very like other hair in appearance, but on close inspection little dark-brown knots are seen at the free end of the hair, and may even be distinguished by the naked eye. These are gregarines. These parasites have a most ignoble ancestry and habitation, being found in the interior of the *pediculus capitis*. It is only due to them, however, that these statements should be verified by other observers before we give all the particulars of their natural history. They are not easily destroyed. They resist the effects of drying, and even of boiling. Acids, alkalies, ether, and other agents would kill them; but these would be injurious to the hair, and so can not be used.

"According to the authority quoted, in the conditions of a ball-room, the gregarines 'revive, grow, and multiply, by dividing into many parts — so called germ-globules; these fly about the ball-room in millions, get inhaled, drop on refreshments—in fact, enter the interior of people by hundreds of ways, and thus reach their specific gregarian development.' We do not answer for the truth of all this natural history; but when the natural history of *chignons* themselves is considered, it may well be all true.

"In Russia the hair of them is supplied by the poorer people, especially peasant women of the Mordwines and the Burlakes, near

the Volga, who do a large trade in it. 'When the Burlake goes out to work in the spring, he perhaps puts a clean shirt on, but he decidedly never takes it off until he returns home in autumn.'

"Verily, as the professor argues, here is a fine chance for parasites. We must leave the subject with ladies and naturalists. Half the awful possibilities of the fashion—which it does not require a microscopist to suggest—would deter men. We can not so certainly reckon upon affecting ladies in a matter of fashion. But of all false things, one of the most objectionable is false hair."—[*The Lancet*, London, February 16, 1867, p. 218.

Deeming the above somewhat startling announcement as being of importance in these days of *chignons*, or "waterfalls" as they are styled in this country, I have copied the article from the *Lancet*, and send it to you for publication, at the same time suggesting that it appear in the department of your Journal allotted to *Diseases of Women*.

The *Lancet* is mistaken. The "Russian professor" is not entitled to the credit of having discovered or of having named the Gregarine, for we find an account of that parasite in the Micrographic Dictionary, by Griffith and Henfrey, London, 1860, p. 323, which dates the discovery of this genus of Entozoa, by Dufour, as far back as 1837.

Surgical Maltreatment of General Lafayette.

Cases detailing the sufferings and diseases of remarkable men are particularly deserving of attention, for they possess the advantage of an interest derived from the patient's celebrity, that serves to fix the details more forcibly in the memory of the reader. Our friend, M. Jules Cloquet, the celebrated anatomist and surgeon, has lately published *Souvenirs sur la Vie privee du Generale Lafayette*, in which the following notice of the General's sufferings, from a fracture, occurs: "During his last illness, Lafayette related to us, more than once, the particulars of the treatment he underwent in 1803, for a fracture of the thigh, caused by falling from a hight. Deschamps and Boyer, whose memories I respect, and under whose care I was educated, were called in, and enclosed the limb in a machine constructed so as to maintain it in continual extension. Lafayette having promised his surgical friends that he would pa-

tiently bear the pain and inconvenience necessarily attendant on the treatment, did not give utterance to a single complaint, and did not betray the least sign of being in pain, for the whole twenty days which elapsed before the apparatus was, for the first time, removed;—when it was removed, however, his surgical friends could not conceal their consternation—Deschamps turned pale, and Boyer appeared thunderstruck. The bandages of the upper portion of the apparatus had, by their pressure, cut deeply into the flesh, and exposed the femoral artery, while the skin of the dorsum of the foot was rendered gangrenous, by the inferior bandages, so as to lay bare the extensor tendons of the toes. More than five weeks were required to heal these wounds; and when the cure was completed, an almost complete anchylosis of the hip-joint had taken place, so that he was lamed for life."

We copy the above account of malpractice, by two masters in surgery, from the Dublin Journal of Medical Science, May, 1836, for which it was selected and translated, by the late Dr. Graves. B.

American Medical Association.

The Eighteenth Annual Meeting of the American Medical Association will be held in Cincinnati, on Tuesday, May 7th, 1867, at 11 o'clock A. M. The following Committees are expected to report:

On Quarantine, Dr. Wilson Jewell, Pa., Chairman.

On Ligature of Subclavian Artery, Dr. Willard Parker, N. Y., Chairman.

On Progress of Medical Science, Dr. Jerome C. Smith, N. Y., Chairman.

On the Comparative Value of Life in City and Country, Dr. Edward Jarvis, Mass., Chairman.

On Drainage and Sewerage of Cities, etc., Dr. Wilson Jewell, Pa., Chairman.

On the Use of Plaster of Paris in Surgery, Dr. Jas. L. Little, N. Y., Chairman.

On Prize Essays, Dr. F. Donaldson, Md., Chairman.

On Medical Education, Dr. S. D. Gross, Pa., Chairman.

On Medical Literature, Dr. A. C. Post, N. Y., Chairman.

On Instruction in Medical Colleges, Dr. Nathan S. Davis, Ill., Chairman.

On Rank of Medical Men in the Army, Dr. D. H. Storer, Mass,. Chairman.

On Rank of Medical Men in the Navy, Dr. W. M. Wood, U. S. N., Chairman.

On Insanity, Dr. Isaac Ray, R. I., Chairman.

On American Medical Necrology, Dr. C. C. Cox., Md., Chairman.

On the Causes of Epidemics, Dr. Thomas Antisell, D. C., Chairman.

On Compulsory Vaccination, Dr. A. N. Bell., N. Y., Chairman.

On Leakage of Gas-Pipes, Dr. J. C. Draper, N. Y., Chairman.

On Alcohol, and its Relations to Man, Dr. J. R. W. Dunbar, Md., Chairman.

On the Various Surgical Operations for the Relief of Defective Vision, Dr. M. A. Pallen, Mo., Chairman.

On Local Anæsthesia, Dr. E. Krackowitzer, N. Y., Chairman.

On the Influence upon Vision of the Abnormal Conditions of the Muscular Apparatus of the Eye, Dr. H. D. Noyes, N. Y., Chairman.

On the Comparative Merits of the Different Operations for Extraction of Vesical Calculi, Dr. B. J. Raphael, N. Y., Chairman.

On the Therapeutics of Inhalation, Dr. J. Solis Cohen, Pa., Chairman.

On the Deleterious Articles used in Dentistry, Dr. Augustus Mason, Mass., Chairman.

On Medical Ethics, Dr. Worthington Hooker, Conn., Chairman.

On the Climatology and Epidemics of Maine, Dr. J. C. Weston; of New Hampshire, Dr. P. A. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. Alfred C. Garratt; Rhode Island, Dr. C. W. Parsons; Connecticut, Dr. B. H. Catlin; New York, Dr. E. M. Chapman; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Delaware, Dr. — Wood; Maryland, Dr. O. S. Mahon; Georgia, Dr. Juriah Harriss; Missouri, Dr. Geo. Engelman; Alabama, Dr. R. Miller; Texas, Dr. Greensville Dowell; Illinois, Dr. R. C. Hamil; Indiana, Dr. J. F. Hibberd; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. W. H. Baker; Michigan, Dr. Abm. Sager; Ohio, Dr. J. W. Russell.

Secretaries of all medical organizations are requested to forward lists of their Delegates as soon as elected, to the Permanent Secretary.

W. B. ATKINSON, M. D.,
215 Spencer St., Philadelphia.

American Medical Association.

This body meets in Cincinnati on the 7th of May. A large attendance is anticipated, as, besides the organizations that have heretofore been represented, many new state and county medical societies have been formed, and others which had been suspended in consequence of our national troubles have been revived. These, it is hoped, will all be represented. If so, our Cincinnati friends may expect about five to six hundred representatives of the medical profession of America to claim her hospitality for two or three days during the first week in May.

We trust that the Committee of Arrangements will be able to induce the various railway companies throughout the country to pass delegates and members at *half-fare* over their several roads —not simply to give return tickets, thus compelling the holder to return by the same route he went, and depriving him of the opportunity of passing through the country by two different routes. Let this matter be attended to early, and published in the journals; and let it be known what roads are illiberal, either by refusing commutation at all, or by only giving return tickets. If the companies will commute at all, it can be of no consequence to them whether they allow half-fare or return tickets, while it may be of some importance to the traveller.

A number of Committees are expected to report upon important subjects, and it is to be hoped, that they will be ready with well-digested, *brief* reports, or, if their reports are necessarily long, with abstracts of them, so as not to occupy the time of the Association with long papers to the exclusion of other important business.

A word to our Cincinnati friends. "Let your moderation be known to all men." Make the most ample provision for an intellectual feast—and if you must "feed" the Association, do it in a moderate, substantial, *sensible* manner, as becomes men of science. ESCHEW INTOXICATING DRINKS ALTOGETHER. Let them not be once named among you. If any medical man wishes to make a beast of himself—for Heaven's sake do not disgrace the whole profession of America to accommodate him, but let him go to a tavern among his congeners, and wallow to his heart's content. It is an insult to the profession of medicine to have its meetings disgraced by the presence of men who have no respect for them-

selves or the honorable company they are in. Do not compel the decent members of the profession to appear to countenance those who are mere hangers-on to its meetings for the opportunities they afford them to indulge in their bibulous propensities.—[*Philadelphia Medical and Surgical Reporter.*

Circular No. 6.

In that excellent publication, Circular No. 6, which emanated from the Surgeon General's office in 1865, and which has been so deservedly complimented, both at home and abroad, we find at p. 58, a reference to the seven cases mentioned by Legouest, and it is also stated that the operation performed at Birmingham was a successful one. It adds that during the late war, complete excision of the knee-joint has been performed eleven times, and it furnishes an abstract of each case. The only successful cases were the first and last upon the list, viz: that in which Dr. Bontecue operated, which we have already quoted, and the last, which we copy from Circular No. 6. The success claimed in the next case is so extraordinary as to suggest some doubts of its authenticity. It appears on the Quarterly Report of the General Hospital, at Kansas City, Missouri, for the last quarter of 1863.

Private Samuel Miller, Co. L, 1st Missouri State Militia, was admitted into the General Hospital, &c., April 1, 1863. He was wounded December 28th, 1862, the ball having fractured the outer condyle of the right femur, passed obliquely through the patella, and lodged in the head of the tibia. April 7, 1863, Acting Assistant Surgeon Joshua Thorn, U. S. A., performed an excision of the outer condyle of the femur, with part of the shaft, removing by an oblique section two and a half inches from the femur, together with the patella and articulating surface of the tibia. No anæsthetic was used. The wound was full of shattered bone, and an extraordinary amount of pus came out of the joint. There was severe pain and extensive inflammation in the leg. The patient was much emaciated from copious diarrhœa. Skin dark and dry, very like parchment. At the time of the operation he was nearly insensible, pulse 120 and feeble. He was greatly prostrated after the operation, but on the next day he revived. Nutritious diet, with porter, was given him, and he continued to improve. Complete bony anchylosis resulted, with the leg bent about ten degrees. On December 8, 1863, Miller was discharged from service. He was able to walk almost as well as ever.

From the examination of the details of the nine fatal cases reported in Circular No. 6, it appears that patients perished from

pyæmia and exhausting discharges. It must be admitted, therefore, that exsection of the knee-joint for gun-shot injuries has been very unsatisfactory in its results, and from what we have seen of the results of amputations performed under the same circumstances—between the end of the second and twenty-first day after injury, we have no doubt a similar termination would have followed. In the Kansas case more than three months, and in my own, some three years had elapsed from the time of the injury, and when all the cases shall have been collected in which the operation has been done at a considerable period after the injury, it will probably be regarded with much more favor by military surgeons than at the present date of writing. G. C. B.

Medical College of Ohio.

The Forty-sixth course of Lectures in this institution closed on Saturday, February 23, and on Friday, the 1st of March, the commencement exercises were held in one of the lecture-rooms of the College. After an address from Flamen Ball, Esq., President of the Board of Trustees, Professor M. B. Wright, Dean of the Faculty, delivered the valedictory.

The following is a list of the graduates: R. S. Applegate, I. W. Baldwin, F. Brunning, F. Dowling, D. C. Fay, T. G. Herron, J. H. Hazard, D. W. Lamme, T. C. Minor, A. A. Parker, L. A. Querner, E. L. Shackleton, J. H. Tucker, J. W. Utter, and J. E. West, of Ohio. W. H. Berry, T. J. Bowls, I. A. Comstock, E. T. Elder, C. P. Gerstmeyer, H. D. Hinckley, J. P. Logan, O. L. Mahoney, D. H. Miller, C. B. Miller, M. V. B. Newcomer, J. W. Pugh, J. H. S. Reiley, S. B. Robbins, I. T. Scearce, Chas. Scudder, W. H. Stewart, T. C. Vannuys, and W. H. Wallace, of Indiana. W. B. Blanton, C. H. Hubbard, T. G. Hall, J. F. Hoover, Sam'l. Hunter, Thos. Patton, and J. T. Whittaker, of Kentucky. R. G. Coleman, of Missouri. G. W. Dudding, of Virginia. F. L. Eaton, B. F. Hamilton, G. J. Ross, and B. Ward, of Illinois.

Hospital Appointments.

The following appointments of resident physicians in the hospitals of this city, for the ensuing year, have been made: In the Commercial Hospital, James T. Whittaker, M. D., Chief; and W. K. Perrine, M. D.; Chas. P. Judkins, M. D.; Alex. Guthrie, M. D., and A. P. Courtwright, M. D.

In the Hospital of the Good Samaritan: Frank Brunning, M. D., and L. A. Querner, M. D.

Spring Course of Lectures.

A Course of Lectures in the Medical College of Ohio, will commence March 18th, and continue three months. The lecturers in this course will be Drs. Nickels, Hudson, Wright, Miller, Kearney, Walton, Schneider, and Tibbals. Members of the Faculty and Staff of the Good Samaritan Hospital, will also deliver clinical lectures in that institution.

The Miami Medical College announces a similar course.

THROUGH carelessness in proof-reading, a few annoying typographical and other errors appeared in our last number. In justice to Dr. J. C. Reeve, we correct the first sentence in the extract from his most able Review on Anæsthesia, published in the January number of the *American Journal of Medical Sciences*. Dr. R. is made to say: "The amount of danger is not only small, but more important, for it is in a great degree preventable." It should have read as follows: "The amount of danger is not only small, but, more important far, it is in a great degree preventable." In our notice of the injury sustained by Dr. Aitkin, the printer has made us say that the thigh was fractured "just below the *nochantlets*," for "just below the *trochanters*." Now that the publishers have made more perfect arrangements in their printing establishment, and have given us paper and type not easy to be surpassed, we hope, in the future, to guard against these blunders, so annoying to both contributors and editors. Again, our April number will appear about the 10th of the month, and from that period we shall aim at punctuality on the first of the month. Our publishers have now one of the best arranged houses in the country, their printing, binding, etc., all being done over their new and magnificent store on West Fourth street.